DOCUMENT RESUME

ED 278 574 SO 017 007

TITLE	Didactics of Geography: Selected Bibliography for 1982. Information Bulletin.
INSTITUTION	Charles Univ., Prague (Czechoslovakia).
PUB DATE	85
NOTE	392p.
PUB TYPE	Reference Materials - Bibliographies (131)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Annotated Bibliographies; Comparative Education; Educational Media; Educational Objectives; Foreign Countries; Foundations of Education; *Geography; *Geography Instruction; *Global Approach; Higher Education; Periodicals; Planning; Resource Materials; Teaching Methods; Textbooks
IDENTIFIERS	Czechoslovakia

ABSTRACT

Over 460 resources published between 1981 and 1982 are listed in this selected bibliography on the didactics of geography. Entries are classified under the following headings: (1) the didactics of geography as a scientific discipline; (2) textbooks on geography instruction and the didactics of geography in Czechoslovakia; (3) contemporary geography instruction and the didactics of geography in foreign countries; (4) educational and teaching objectives and the tasks of geography instruction; (5) geography instruction as a component of education at general education schools; (6) the educational teaching process in geography instruction with its gnoseological, psychological, and logical foundations; (7) the content of geography instruction; (8) didactical principles in geography instruction; (9) geography instruction methods; (10) geography instruction media; (11) organizational forms of geography instruction; (12) planning geography instruction; (13) the outcome of geography instruction; (14) the geography teacher; and (15) articles containing information on scientific geography. For each entry, the title of article, volume number, date, issue number, page numbers, abstract, descriptors, and country of origin are given. Abstracts are excerpted from 10 Czechoslovakian journals and from journals from Poland, the Federal Republic of Germany, the United States, USSR, Bulgaria, and Great Britain. English translations of titles and abstracts are presented throughout. (LH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

INFORMATION BULLETIN

ED 278 574

SO017007

DIDACTICS OF GEOGRAPHY

Selected Bibliography for 1982

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

PEDAGOGICKA FAKULTA

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CENTRAL LIBRARY –
SECTIONAL INFORMATION CENTRE OF
ACULTY OF THE CHARLES UNIVERSITY
Prague 1985

BEST COPY AVAILABLE

TABLE OF CONTENT

Page

List of excerpted journals 13

Authors of annotations 14

Bibliographic summary sheet and classification of entries

1 The didactics of geography as a scientific discipline. The general didactics of geography, the special didactics of geography

1.1 The subject-matter of the didactics of geography, the didactics of geography as a subject of study at institutions of higher learning

1.2 Definition and objectives of the didactics of geography

1.3 Significance of the didactics of geography for practical geography teaching

1.4 Relation to other sciences and place in system of sciences

1.5 Basic terms and scientific terminology of the didactics of geography

1.6 Scientific methods, main sources, organisation of projects and the structure of the didactics of geography 15

1.7 Fundamental differences between geography teaching and the didactics of geography in the capitalist and socialist countries, the development of instruction and the didactics of geography in foreign countries

1.8 Journals on the didactics of geography

1.9 Textbooks on the didactics of geography

2 Textbooks on geography instruction and the didactics of geography in Czechoslovakia

2.2 The history of geography instruction and the didactics of geography in Czarist Russian and the USSR

2.3 The history of geography instruction and the didactics of geography in the other socialist countries
2.4 The history of geography instruction and the didactics of geography in the foremost capitalist countries

3 Contemporary geography instruction and the didactics of geography in foreign countries
3.1 Contemporary geography instruction and the didactics of geography in the socialist countries 18

4 Educational and teaching objectives and the tasks of geography instruction 21

5 Geography instruction as a component of education at general education schools 22
5.1 Relations between geography as a science and geography instruction at general education schools
5.2 Specific aspects of geography instruction at general education schools 24
5.3 Specific aspects of geography instruction at vocational schools
5.4 The principles of adjusting geography for general education schools
5.5 The position of geography in the curriculum of general education schools 25
5.6 Specific aspects of geography instruction at various levels of general education schools
5.7 Mutual relations between geography instruction at various levels of general education schools

5.8 The educational and teaching significance of instruction in various geography specializations, mutual relations between these specializations, determining the sequence of instruction in various geography specializations
5.9 Elective geography instruction at general education schools 26

6 The educational and teaching process in geography instruction with its gnoseological, psychological and logical foundations
6.1 The forming of geographical notions 27
6.2 Acquainting pupils with geographical laws
6.3 Acquainting pupils with the use of geographical laws in practical life
6.4 Acquainting pupils with basic scientific methods used in geography
6,5 Developing skills and habits 29
6.6 The practical utilization of knowledge, skills and habits learnt in geography instruction
6.6.1 Combining geography instruction with socially beneficial work
6.7 Guiding pupils towards successful learning in geography, the activation of pupils 30
6.7.1 Analysing the causes of pupil failure in geography and methods of overcoming these causes
6.7.2 The education of logical thinking in geography instruction; logical procedures 31
6.7.3 The development of speech in geography instruction
6.7.4 Logical models in geography instruction; cybernetic models in geography instruction 32
6.8 A scientific education within geography instruction

6.8.1 The development of a scientific worldview in geography instruction 33
6.8.2 Atheist education in geography instruction 39
6.8.3 Education towards socialist patriotism and proletarian internationalism in geography instuction 40
6.8.4 Work education in geography instruction
6.8.5 Polytechnical education in geography instruction
6.8.6 Aestherical education in geography instruction 43
6.8.7 Education towards nature conservation and environmental control in geography instruction 45
6.8.8 Health care education
6.8.9 Defence education 51
6.9 Vocational guidance

7 The content of geography instruction
7.1 The principles of selecting and ordering subject-matter and methods for selecting and ordering subject-matter in geography instruction
7.1.1 The integration of geography with other natural science subjects
7.1.2 Instruction on the basis of examples and categories 52
7.1.3 Problem teaching 53
7.1.4 Team instruction
7.2 The selection of guiding ideas in geography instruction and distinguishing substantial and subsidiary subject-matter; basic subject-matter
7.3 Dividing the geography syllabus into various classes, the principles of dividing subject-matter into didactical systems

7.4 The linear and concentrical ordering of subject-matter
7.5 Dividing subject-matter into sections, topics and subtopics
7.6 Geographical syllabi and curricula 55
7.7 Study projects concerning existing geography syllabi and curricula
7.8 A comparative study of curricula in the socialist and foremost capitalist countries
7.9 Modernization endeavours in geography instruction 63

8 Didactical principles in geography instruction
8.1 The didactical principles of a scientific approach
8.2 The didactical principles of integrating school and everyday life
8.3 The didactical principles of educational instruction
8.4 The didactical principle of a systematic approach and correct sequence
8.5 The didactical principle of ostensiveness and unity between the concrete and the abstract
8.6 The didactical principle of combining theory and practice
8.6.1 The didactical principle of comprehensibility
8.6.2 The didactical principle of being aware of what has been learnt
8.6.3 The didactical principle of the permanent nature of what has been learnt
8.7 The didactical principle of taking into account an individual approach to pupils

8.8 The didactical principle of taking into account interdisciplinary relations 65

9 Geography instruction methods 67
9.1 The dependency of geography instruction methods upon scientific methods used in geography
9.2 The classification of geography instruction methods
9.3 The principles for chosing instruction methods and their correct use
9.4 The method of coherent exposition 68
9.5 Discussion methods 69
9.6 Methods of work with literature, textbooks, the teaching-syllabus, workbooks, worksheets, atlases and maps 70
9.7 The method of observing geographical phenomena
9.8 The experiment method 73
9.9 Other geography instruction methods 74

10 Geography instruction media 78
10.1 Individual types of geography instruction media and their significance
10.1.1 The study of the didactical value of various instruction media
10.1.2 Principles for the selection of geography instruction media and furnishing schools with them
10.2 Minerals, rocks and soil samples
10.2.1 Crop plants
10.3 Globes and models for geography instruction 80
10.3.1 Films
10.3.2 School television and radio programs 82
10.3.3 Pictures
10.3.4 Flannelegrams and magnetograms
10.3.5 Transparencies
10.3.6 Drawings 85

10.3.7 Photographs 86
10.3.8 Slides and slide series 90
10.3.9 Diagrams, graphs, statistical tables 91
10.4 Atlases, maps and three-dimensional maps 92
10.4.1 School bulletin boards, press clippings 101
10.5 Geography textbooks and methodological handbooks 104
10.5.1 Worksheets, workbooks, didactical tests, questionnairs, didactical crosswork puzzles, games 113
10.6 Popular science literature and journals 117
10.6.1 Scientific literature
10.7 Notes taken by pupils
10.8 Instruments, apparatus and special facilities for geography instruction, sandboxes
10.8.1 Measurement instruments for school meteorological station,s sextants 117
10.8.2 Instruments for forming images and for the reproduction of sound, film projectors, episcopes, epidiascopes, slide projectors, tape recorders, radios, gramophones, video recorders, etc. 118
10.8.3 Optical instruments, telescopes, cameras, computers 120
10.9 Geography instruction classrooms, study rooms, storage rooms, school meteorological stations 121

11 Organizational forms of geography instruction
11.1 Survey of organizational forms used in geography instruction
11.2 The teaching lesson
11.2.1 Excursions, museums 122
11.2.2 Geography seminars 131
11.2.3 Geography discussions 133
11.2.4 Geography Olympiads and other competitions 134

11.3 Independent homework 136
11.4 Field work 140
11.5 Science trails 151
11.6 Cooperational forms of geography instruction
11.6.1 Instruction for whole class
11.6.2 Instruction in sections
11.6.3 Instruction in groups 152
11.6.4 Pair instruction

12 Planning geography instruction 153
12.1 Drawing up plans for geography instruction and plans for individual topics 154
12.2 Preparations of teacher for class, for instruction and for various organisational forms of instruction 157

13 The outcome of geography instruction
13.1 Verification of the outcome of geography instruction 225
13.2 Assessing the outcome of geography instruction 227
13.3 School-leaving examinations in geography
13.4 The outcome of Geography Olympiads and other competitions
13.5 Geography examinations 228

14 The geography teacher 229
14.1 The demands made of a geography teacher
14.2 Teacher training in regular, inservice and postgraduate study at pedagogical and natural science faculties 230
14.3 Doctoral work in the didactics of geography
14.4 Public work of teachers, their activities in district and regional pedagogical committes, supervisors, visits to classrooms

14.5 Self-education of geography teachers
14.6 Pedagogical readings 2 1
14.7 Geographical meetings, conferences, specialized commissions, scientific institutes and scientific societies 232
14.8 Vocational guidance and the geography teacher
14.9 Outstanding geography teachers, outstanding geographers, anniversaries, awards, deaths 238

15 Articles containing information on scientific geography 254
15.1 Mathematical geography 256
15.2 Physical geography 257
15.3 Socio-economic geography 291
15.4 Regional geography 341
15.5 Geographical cartography 390
15.6 Landscape theory
15.7 Environmental theory 391

Note:

In this issue of The Didactics of Geography we are introducing a new classification which replaces the previous atomisation of headings and their repetition within the framework of each geographical specialisation. The new classification should substantially facilitate retrival, as well as the cataloguing of individual entries; for instance basic terms used by the didactics of geography are now found under a single heading (instruction media, organisational forms of instruction). This classification is based on the existing range of special didactics in Czechoslovakia, as well as elsewhere.

Dr. Antonín Altmann

List of excerpted journals

Czechoslovakia

Geografický časopis SAV, 34, 1982, No. 1-4
Komenský, 107, 1982, No. 1-10
Lidé a země, 31, 1982, No. 1-12
Památky a příroda, 7, 1982, No. 1-10
Přírodní vědy ve škole, 33, 1981-1982, No. 1-10
Sborník Československé geografické společnosti, 87,
    1982, No. 1-4
Socialistická škola, 23, 1981-1982, No. 1-10
Učební pomůcky ve škole a v osvětě, 21, 1981-1982,
    No. 1-10
Učitelské noviny, 16, 1982, No. 1-51
Životné prostredie, 16, 1982, No. 1-6

Other countries

Czasopisno geograficzne (Poland), 53, 1982, No. 1-4
Die Erde (FRG), 112, 1982,No. 1 3
Földzartánítás (Hungary), 25, 1982, No. 1-6
Geografia w szkole (Poland), 35, 1982, No. 1-6
Geographical Review (USA), 72, 1982, No. 1-3
Geographie im Unterricht (FRG), 7, 1982, No. 1-12
Geographische B erichte (GDR), 27, 1982, No. 1-4
Geographische Rundschau (FRG), 34, 1982, No. 1-12
Geographische Zeitschrift, 70, 1982, No. 1-4
Jzvestija vsesojusnogo geografičeskogo obščestva,
    Moscow, (USSR), 114, 1982, No. 1-6
Journal of Geography (USA), 81, 1982, No. 1-7
Lehrmittel aktuell (FRG), 8, 1982, No. 1-6
National Geographic (USA), 161, 1982, No. 1-6
National Geographic (USA), 162, 1982, No. 1-6

Obučenieto po geografija (Bulgaria), 25, 1982, No.1-6
Oświata i wyhowanie (Poland), 1982
Petermanns geographische Mitteilungen (GDR), 126, 1982
No.1-4
Science Education, 66, 1982, No. 1-5
Teaching Geography (GB), 8, 1982, No. 1-4
Vestnik Moskovskogo universiteta. Serija geografija. (USSR), 53, 1982, No. 1-6
Zeitschrift für den Erdkundenunterricht (GDR), 34, 1982, No. 1-12

Authors of annotations

PhDr. Antonín Altmann
Dr. E. Klinger
Ing. M. Rošický
PhDr. Ludmila Rošická
PhDr. Zdeněk Slavík

1.6 Scientific methods, main sources, organization of projects and the structure of the didactics of geography

1. AURADA, K.D.:
Zur Anwendung des systemtheoretischen Kalküles in der Geographie (On the use of system theory calculus in geography)
Petermanns geographische Mitteilungen, 126, 1982, No. 4, pp. 241-249. Lit. 27, fig. 2, tab. 2

The author describes the possibility of using system theory calculus in geography. On the basis of a general definition of a geosystem he indicates the possibility of using system theory mathematical methods in geography system techniques. System analysis makes it possible to carry out objective identifications, differentiations and structural analysis which create the prerequisites for mathematical modelling on a system basis (analysis. identification, synthesis)

geography - system analysis - geosystem - synthesis - logical procedures - FRG, 147753

2. NEFF, E.:
Arbeitsteilung als Ordnungsprinzip der geographischen Wissenschaft (The division of labour as the ordering principle of the geographical sciences)
Petermanns Geographische Mitteilungen, 126, 1982, No. 2, pp. 119-124. Lit. 18.

Discussions among geographers have so far not produced any results for the new orientation of geography. The fact that discussions are held at different levels without any conclusions being drawn and that the obsolete concept of exceptionalism (SCHAEFFER, 1953) is still adhered to, are considered to be drawbacks. Experiences with theoretical system studies have indicated that the traditional system of geographical sciences is not adequate to its tasks. A scientific division of labour should be achieved among the various geographical sciences. Also the atomisation of sciences, which leads to the constant forming of new disciplines is considered to be negative, as well as a lack of interdisciplinary studies.

geography - system + science - exceptionalism - division of labour - interdisciplinary relations -147753

3. FAHN, H.J.:
Zur Einführung: Warum Themenheft Orient ? (Introduction: Why a special issue devoted to the Orient ?)
Geographie im Unterricht, 7, 1982, No. 11, p. 419.
1 map

The author explains why this journal is issuing a special number devoted to the Orient. Its articles contain basic information about this area, which is at present in the centre of international politics. A large number of both political and economic interests confront each other here. This politically unstable area is described from various aspects: it includes North Africa and the Near East which form a specific geographical unit. The Orient includes the following countries: Mauritania, the Spanish Sahara, Marocco, Algeria, Tunisia, Libya, Egypt, the countries of the Arabian peninsula including Kuwait, Jordan, Lebanon, Syria, Iraq, Iran and Afganistan. Turkey has a special position, as well as Israel and Pakistan. Usually Pakistan is not included into the term Orient, in spite of the fact that Islam is its religion, while Israel is included and is not Islamic.

geography - desert - North Africa - Near East - 147711.

4. FRAEDRYCH, W.:

Einführung in das Thema des Heftes und Anmerkungen zu den Beiträgen (Introduction to a special issue of the journal and comments on various articles)

Geographie im Unterricht, 7, 1982, No. 3, p. 81.

This special issue of the journal deals with cities in geography teaching. First the term city is discussed - as an administrative unit and from other aspects. After World War II extensive urbanization occured all over the world. At present cities are complex mechanisms, which should be analysed together with their vicinity. Most cities have serious traffic and housing problems. A possible definition of the city is the following: a spatial concentration of housing and jobs and people with predominantly tertiary and secondary economic activities and with internally differentiated and varied transportation media between various areas, etc. The articles in the special issue and their authors are briefly introduced.

instruction + geography - socio-economic sphere - geography of settlements - cities - transportation - FRG - 147711.

3.1 Contemporary geography instruction and the didactics of geography in the socialist countries

5. BIBIK, A.E.:
Za ukreplenie svyazi metodiki obucheniya geografii s sovremennoy didaktikoy (For stronger links between the methodology of geography instruction and modern didactics)
Geografiya v shkole, 49, 1982, No.1, pp. 35-39.

The author criticizes the predominating traditional method of instruction, the insufficient use of creative methods based on the didactical concepts of Skatkina and Lerner and the insufficient ability of pupils to fulfill tasks which require an independent approach. He enumerates articles published in this journal during the last two years which deal with the methodology of geography instruction from the point of view of new didactical methods and recommends them to geography teachers, especially those who are beginners. Also the booklets published by Znanie publishers are stimulating and the author describes them in detail. In modern instruction not only the memory should be used, but rather systematic learning; operational skills and the ability to generalize facts should be stressed.

didactics of geography - geography instruction - teaching methods - problem teaching. 147719

6. MATRUSOV, J.C.:

Sostoyanie i problemi metodiki obucheniya geografii v yubileynom godu - shestidesyatiletiya obrazovaniya SSSR (The situation and problems of the methodology of geography teaching in a jubilee year - the 60th anniversary of education in the USSR)
Geografiya v shkole, 49, 1982, No. 6, pp. 25-29.

The didactics of school geography are to a great extent based on the experiences of pre-revolutionary geographers and educators. The author describes the activities of these educators and provides their names. He deals in detail with the didactics of pre-revolutionary Russia as well as with the present period. At present the objective of geography teaching is the forming of a dialectical and materialistic view of nature, the population, the economy and their mutual relations, as well as the education of the young generation in the spirit of Soviet patriotism and proletarian internationalism. The author also analyses the curriculum and the educational and teaching objectives of geography instruction in the sixties and seventies and comes to the conclusion that the main problems with which didactics are faced can be summed up into the following points:

1) It is necessary to strengthen the educational potential of this teaching subject, especially as far as work education and vocational guidance are concerned. At the same time the amount of factographic subject-matter should be descreased so that those sections of the syllabus which deal with the general and specific objectives of this teaching subject can be extended.
2) An improved teaching syllabus which places greater stress on important components of the course should be adopted and the principles according to which these

components are chosen should be developed, as well as the methods to be used for their teaching. 3) More attention should be devoted to integrating geography with every-day life while taking into account ecological and economic factors; the use of various teaching media and textbooks should be improved. 4) It will be necessary to improve teacher training from the point of view of existing actual conditions.

didactics of geography - geography instruction - 60th anniversary of school system + USSR - educational and teaching objectives - communist education - USSR. 147707.

7. TIITS, K.A.:
Fakultativniy kurs "Narodnoe khozyaystvo svoyey respubliki" (The elective course "National economy of our Republic")
Geografiya v shkole, 49 1982, No. 1, pp. 42-42.

In connection with the vocational guidance of youth in secondary schools of the Estonian SSR, the elective subject "The national economy of our Republic" has been introduced in the 9th or 10th classes. The course deals with industry, agriculture, transportation and communications, construction, services and economic contacts with the other Union republics. One sixth of the lessons in the course are devoted to excursions and one third to practical excercises which are concerned mostly with the economy of the locality or city in which the school is found. These practical excercises serve two purposes: 1) to provide pupils with various information sources and teach them to use them, 2) teach pupils to use this information in an independent manner. The introduction of this elective subject has improved the economic and geographical knowledge of pupils.

didactics of geography - geography instruction - elective courses - national economy - 147713

4. Educational and teaching objectives and the tasks of geography instruction

8. HAGEN, D.:
Affektive Lernziele und Geographieunterricht
(Affective learning objectives and geography instruction)
Geographisches Rundschau, 34, 1982, No. 5, pp. 244-248.
Lit. 5

The author discusses affective objectives in geography instruction from the point of view of general didactics, as well as special didactics. Affective (education) objectives should be taken into account and made use of. The author points to the possible causes of their neglect and provides various examples. The article is divided into three sections, the first deals with various observations connected with affective objectives, the second examines the problem from the point of view of psychological theory, which pertains also to geography instruction and the third cites various impulses for implementing affective objectives in geography instruction. In place of a summary the article contains 7 points which pertain to problems connected with affective objectives.

didactics of geography - geography instruction - educational teaching objectives - teaching media - FRG. 147707.

9, KAIN, R.:

Problems and Sources in Historical Geography: Guidelines for Teachers and A-level Students

Teaching Geography, 7, 1982, No. 3. pp. 128-129.

The aim of the article is to provide teachers and students with interesting material concerning the content and methods of historical geography, which studies geographical changes in time which occur not only on a small-scale, but world-wide. What type of changes does this concern and where do they occur ? The author cites the example of cutting down forests, of founding or abolishing fish ponds, building dams, the founding of new settlements, planting of new forest strips, founding orchards and gardens, extending urban areas, etc. Population studies and discussions concerning the factors which influence population are of fundamental importance for historical geography. The author discusses at length the sources of historical geography.

geography instruction - historical geography - observations - field work - Britain. 147751.

5. Geography instruction as a component of education at general education schools

10. HARPER, R.A.:

Geography in General Education: The Need to Focus on the Geography of the Field

Journal of Geography, 81, 1982, No. 4, pp. 122-139.

Kenneth Boulding has shown that when all geographical disciplines are mutually utilized it is possible to gain a view of the Earth as a total system. This approach to geography is based on a modern system approach. The application of system theory to the social sciences also provides the key to changes in the approach to geography instruction in general education. Geography should provide students with an awareness of the Earth as a whole, as a functional system, including the utilization of the Earth as man's environment. At present the majority of the people on Earth have benefited from the industrial revolution, but nevertheless large numbers of people must rely upon their own local environment, in which they must find everything they need for their existence. In some parts of the world a modern system includes the whole population, while elsewhere it is confronted by a traditional system. These aspects are also reflected in individual geography disciplines. Individual theories concerning only partial aspects or sub-systems are no longer adequate.

didactics of geography - geography instruction - system theory - Britain. 147701.

11. KOCH, R. _ WAGERN, E.:
Mehr Raum für Fach Erdkunde in der Schule! (More scope for geography in schools !)
Geographie im Unterricht, 7, 1982, No. 5, p. 169.

Geography is an important component of general education. But in the schools it has lost the position of a leading teaching subject, in spite of the fact that it is the only one which deals with the spatial aspects of human existence. Some components of geography have been added to the social sciences while geography itself has lost a large number of lessons in the schools. From the 7th class onward only a single weekly lesson is devoted to it. Also there is a shortage of teachers with this specialization. But without geography it is impossible to fulfill tasks which await society in relation to environmental conservation, as well as problems of the contemporary worlds. The subject, however, requires a modernization of teaching syllabi and making greater use of excursions to the vicinity of the school, learning to make observations and to use a map outdoors. An important task for the present is to gain a better position for geography within secondary school curricula.

didactics of geography - geography instruction - institutions of higher learning - secondary school - curricula - syllabi - modernization - 147701.

5.2 Specific aspects of geography instruction at general education schools

12. HEWES, D.:

Preschool Geography: Developing a Sense of Self in Time and Space

Journal of Geography, 81, 1982, No. 3, pp. 94-97.

Teachers and parents seem to be constantly surprised by the lack of knowledge of children as far as geography is concerned, not only in basic, but also in secondary school. The author discusses these gaps in knowledge and expresses the opinion that preschool aged children (under six years) should have a sense of self in time and space developed already in kindergarten. The author bases her arguments on Piaget´s development psychology and here describes a syllabus for acquainting children in kindergarten with the topography of the environemnt, for instance the vicinity of the school, a nearby park, etc. Also the preparation of teachers for such tasks is discussed and how teachers should capture the interest of young children in this type of subject-matter.

didactics of geography - geographyinstruction - kindergarten - preschool age - Britain - 147707

5.5 The position of geography in the curriculum of general education schools

13. Sytuacja geografii w szkolach (The situation of geography in the schools)
Czasopismo geograficzne, 53, 1982, No. 3-4, pp. 362-363.

The school commission of the Polish Geographical Society held a discussion on the situation of school geography at its recent meeting. The members of the Society have contributed to the creation of new teaching syllabi for school geography. The new teaching syllabus and textbook for the 6th class was first verified at 19 basic schools before it was generally introduced. Conferences held in 1979 and again in 1980 were devoted entirely to this problem. The Ministry of Education has decided to return to the model of general education where 8 years are spent in basic school and 4 in a general education secondary school and this has led to changes in the curriculum. The position of geography has now somewhat improved in basic school and changes in this direction are now being considered also for secondary schools. But in comparison to geography teaching in the USSR, in Czechoslovakia and in some of the developed capitalist countries, geography instruction in Poland is still behind.

didactics of geography - geography instruction - basic school - secondary school - curriculum - criticism - Poland. 147715.

5.9 Elective geography instruction at general education schools

14. VARAJTI, K.:
A fakultatív fōldrajztanitás a gimnáziumban (Elective courses in geography at general education secondary schools)
Fōldrajztanitás, 25, 1982, No. 3, pp. 79-82.

The study aims at defining the objectives of elective geography courses: on the basis of the geography teaching syllabus, instruction is concentrated on the further and extended teaching of geography, especially about the environment in which the economic life of contemporary society takes place. It strives to discover and show the inner laws governing basic processes in the geographical environment and its influence on the economic life of society. The study describes the introduction of elective courses in Hungary and the links between elective geography courses and vocational guidance. In conclusion the author stresses that the modernization of teaching in this area will require the cooperation of specialists both in theory and practical teaching.

didactics of geography - geography instruction - elective courses - teaching methods - modernization + geography instruction. 147717

6.1 The forming of geographical notions

15. BARBAS, J.:
Pojecie regionów i regionalizacji (The notion of regions and regionalisation)
Geografia w szkole, 35, 1982, No. 1, pp. 4-6.

One of the key problems of contemporary geography is the notion of a region and regionalisation. An extensive literature exists worldwide concerning this problem and over 100 different definitions of regions can be found. Also the term regionalisation is less than unequivocal. Most definitions do not stress the natural component of a region, but rather social and anthropogenic factors. Most geographers distinguish between physical geographic regions, which are determined by the natural environment, the structure of the terrain, the system of waters, vegetation, etc. and ecological regions which represent an area formed by social labour and which form complexes from the point of view of production. The author confronts Soviet and American opinions concerning regions. They can be assessed according to one characteristic (simple regions) or according to a larger number of signs (complex regions). In Soviet literature the distinction is made between homological and multivector regions.

didactics of geography - geography instruction - terminology - forming of notions - region - regional geography. 147 713.

16. KNCHEVA, L.:
Sistema po ponatiye v razdela "Fizikogeografski kompleksi"
(The system of notions found in the section "Physical geography complexes")
Obucheniete po geografiya, 25, 1982, No. 4, pp. 9-14.
Lit. 17., tab. 2.

The section on physical geographic complexes is taught in the 7th class and is of great educational and teaching importance. It provides pupils with knowledge on various natural complexes, their creation and development and acquaints them with geographical laws. Didactical literature stresses that the forming of notions is one of the most important aspects of instruction. On the basis of a survey of the relevant literature, the author explains various notions, specifically those relevant to the teaching syllabus for the 7th class. The tables contain the section of the syllabus cited in the title,divided into individual lessons and the relevant pages in the textbook, and for each lesson specific notions. This provides the teacher with a good survey of the subject-matter and its most important notions.

didactics of geography - geography instruction - physical geography - forming of notions - basic subject-matter - structuralization + subject-matter - Bulgaria.
147714.

6.5 Developing skills and habits

17. VASILEVA, G. - VLKOVA, I.:
Izgrasdane na umene za sravanen pri obuchenieto po rodinoznanie i geografiya (Cultivating the skill of making comparisons in civics and geography instruction) Obuchenieto po geografiya, 25, 1982, No. 1, pp. 18-24. 3 tabs.

According to S. Stambolyeva the skill of making comparisons has three basic forms: 1. comparisons in which essential signs are distinguished from non-essential ones (essential notions include for instance the terms continent, island, etc.), 2. comparisons of objects or phenomena which look the same and where use is made of unessential signs, for instance similar seas, cities, etc., 3. comparisons of mutual relations where similarities and differences between closely percieved geographical objects and phenomena are sought, such as the relief of a landscape, the course of a river, etc. The subject-matter of these comparisons is covered by the teaching syllabi for the 4th to 7th grades. The skill of making comparisons is one of the foundations of logical thinking and is an integral component of analysis and synthesis, generalisations, systemisations, etc. It is therefore necessary for this logical procedure to become a habit which pupils learn systematically from the lowest grades upward.

didactics of geography - geography instruction - basic school - 4th to 7th grade - learning skills - logical procedures - comparisons - Bulgaria. 147713.

6.7 Guiding pupils towards successful learning in geography; the activation of pupils

18. PAPÍK, M.:
Rozvoj aktivnej činnosti žiakov v problémovom vyučovanie
(Developing pupil activity in problem teaching)
Přírodní vědy ve škole, 33, 1982, No. 1, pp. 35-38. Lit. 8.

The purpose of the present restructuralization of geography instruction is not only to improve the quality of instruction from the point of view of its content, but also to improve the educational and teaching process. Teachers should use such media, methods and forms of instruction which increase the activity of pupils in class and provide opportunities for their creative activities. When the theory and practice of the didactics of geography cease to develop, the danger arises of suppressing pupil activity and hence the effectiveness of the whole teaching process; also pupils´ independence and creative thinking suffer. The author analyses the outcome of special activating endeavours in geography instruction according to the new teaching syllabus and new textbook for the 5th class; he places special stress on the importance of these activating measures, as well as the use of problem teaching, the creation of problem situations, developing the creative thinking of pupils in which they make use of knowledge they already have and learning the foundations of scientific thinking and creative work. Problem teaching in geography should be organised into a specific system and implemented by first explaining the problem and then discussing methods which can be used to solve the problem. The author cites a number of specific examples.

didactics of geography - geography instruction - problem teaching - activity + pupil - teaching syllabus - textbook + geography - basic school - 5th class - Czechoslovakia. 117799.

6.7.2 The education of logical thinking in geography instruction; logical procedures

19. SUPRICHEV, V.A.:
Geografiya i nazvaniya mineralov (Geography and the names of minerals)
Geographiya v shkole, 49, 1982, No. 4, pp. 21-22.

All the minerals and rocks on Earth, as well as the soil are composed of atoms of various chemical elements and natural compounds - minerals which are distinguished by their composition, internal structure and hence their physical, morphological and other characteristics. The author explains the origins of the word "mineral" and explains that ~~our~~ Earth has approximately 700 different kinds of rocks and 2500 kinds of minerals. The names of minerals have various origins: they include Latin, Greek, Arabic, Turkish, Indian, Slav , etc. names. Each name contains some information about the mineral, for instance its composition, structure, shape of crystal, its properties and various manifestations. Some names of minerals preserve the name of their discoverers, chemists, geologists, geographers, physicists, astronauts, etc. The author concentrates, in the article, on the etymological explanation on some names of minerals, where the root of the name is formed by the location from which the mineral originates. A number of examples are cited, especially from various parts of the USSR.

didactics of geography - geography instruction - science education - terminology - mineralogy - interdisciplinary relations - mineral - rock - etymology - USSR. 147707.

6.7.4 Logical models in geography instruction; cybernetic models in geography instruction

20. BIRKENHAUER, J.:
"Weltstadt" als "Modell" (A "large city" as a "model")
Geographie im Unterricht, 7, 1982, No. 12, pp. 469-476
Lit. 17, 5 figs., 2 transparencies

The creation of the notion of a model is very valuable in geography instruction, where 2 types of models can be formed: specific and theoretical ones. Here the author uses as a point of departure the large urban agglomeration of Paris, as the foundation for creating a specific model of a city. On its basis he then attempts to formulate a theoretical model of a city, valid for all such large communities. He stresses the importance of models in the thinking of pupils. He recommends returning to this notion in subsequent classes, where models of the cities Brasília, Sao Paulo, Calcutta, New York, Tokyo, Johannesburg, Mexico City and Moscow can be dealt with.

didactics of geography - geography instruction - model + theory - large city - settlement geography - Paris - FRG. 147713.

21. OGRISSEK, R.:
Nutzung kartographischer Modelle und Struktur des Erkenntnisprozesses (The use of cartographic models and structures in the congnitive process)
Petermanns geographische Mitteilungen, 126, 1982, No. 2, pp. 127-131. Lit. 20, 2 figs.

According to the author, the cognitive process in geography learning has two objectives, in first concerns geographical knowledge and the second cartographical skills and knowledge. In the former case the student uses a map which must be interpreted, while in the latter the student concentrates on the relationship between reality and its image on a map and the methods by which maps are made. Maps are conceived as cartographic models which can be studied as such.

didactics of geography - geography instruction - model + cartography - map - analysis + map - map + interpretation - GDR. 157752.

6 8.1 The development of a scientific worldview in geography instruction

22. BAKALOVA, S.:
Kategoriyata prichinost v obuchenieto po obshcha fizicheska geografiya (The category of causality in instruction in general physical geography)
Obučenieto po geographiya, 25, 1982, No. 1, pp. 8-13.

The author discusses the relation between cause and effect from the point of view of the philosophy and practical teaching of physical geography in the 7th class. On the basis of a questionnaire administered to over 100 teachers it was found that the majority have insufficient knowledge in philosophy required for this purpose. On the basis of a number of examples the author describes the errors which teachers often make when explaining various physical geography phenomena and their cause and effect and the consequences this has for the mistaken understanding of pupils; she also discusses how this situation should be overcome. She comes to the following conclusions: 1) A causal effect should be understood as an aspect of a more general relation, as one form of its manifestion and context. 2) Cause and effect are mutually interconnected. A phenomenon which precedes another often appears to be its cause and the outcome of the process as its effect. 3) The relationship between cause and effect expresses the origin of the phenomenon. Problems concerning cause and effect should be dealt with in detail from the point of view of methodology, as well as the content of subject-matter in general physical geography.

didactics of geography - geography instruction - physical geography - outcome + instruction - cause + effect - Bulgaria. 147713.

23. REINHARDT, K.H.:
Erziehung zum Frieden durch Geographie. Helmut Ebinger zur Vollendung des 70. Lebensjahres gewidmet
(Eduction to peace through geography: Devoted to Helmut Ebinger at the occasion of his 70th birthday)
Geographie im Unterricht, 7, 1982, No. 12, pp. 488-490.
Lit. 12.

Geography as a school teaching subject is an important component of the educational and teaching process. One of the basic laws of the Federal Republic of Germany concerns the obligation of its citizens to maintain peace. From this follows the obligation of schools to systematically educate pupils to peace. Peace is defined as a state of undisturbed order among individuals and groups, especially among nations, which is based on the mutual understanding of nations. Competition is not in contradiction to peace if the will of both parties to overcome obstacles or find their solution without weapons exists. Education to peace is especially important in geography instruction. In the life of the Federal Republic this education has its expression in a strong peace movement, which is especially important at a time when the danger of war exists in many places in the world. The author discusses those places where conflicts concerning the borders between countries exist, where wars are carried on because of racial conflicts, as well as places where national minorities are struggeling for their rights, where the problem of refugees exists, as well as religious conflicts, the problem of guest workers, urbana agglomerations, etc. The need for education to peace is stressed in this context, as well as the need for peaceful coexistence and detant.

didactics of geography - geography instruction - education + peace - peace movement - FRG. 147707.

24. PETROVA, A. - TOSHEVA, I.:
Osashchestvyavane na nyakoy strani na ideyno-politicheskoto vazpitanie chrez obuchenieto po geografiya v peti i shesti klas (Carrying out ideological and political education in geography instruction in the 5th and 6th class in some countries)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 24-31. Lit. 4, 4 tabs.

Geography as a teaching subject provides extensive opportunities for the ideological and political education of pupils. In the 5th and 6th classes pupils become acquainted with the terms "race" and "colonialism" and they learn to distinguish capitalist, developing and socialist countries and their specific characteristics. The teacher should at the same time closely follow the interest these problems generate in pupils and to support this interest. The authors recommend that teachers before beginning to teach geography, first determine the level of political awareness of their pupils on the basis of a brief questionnaire. They describe the situation from this aspect at the school where they teach and also the methodologies they use in this context. They strive to constantly up-date the subject-matter they teach and to instill in pupils correct opinions and stands. They recommend the following topics in this context: "A political map of Africa", "The most important countries of Africa", "The inhabitants of Latin America", etc. After the completion of every topic they organize a discussion on the current problems of the region in question and then the pupils take a test concerning their convictions and political knowledge. The outcome of these tests are summed up in the form of a table. The authors come to the following conclusions: Pupils in the 5th and 6th classes are capable of understanding and learning for instance the following important notions: "race", "colony", "capitalist country", "socialist country", etc. They understand the advantages of the socialist system but some difficulties also arise. Pupils are for instance unable to explain the specific aspects of the national economy of various countries and they only very slowly gain an interest in political developments throughout the world. It is necessary to often discuss these problems with them and thus strengthen the educational impact of the teaching process.

didactics of geography - geography instruction - regional geography - basic school - 5th and 6th class - Bulgaria. 147707.

25. TURKOTA, J.:
Úlohy zemepisu pri realizácii svetonázorovej výchovy vyplývajúce zo záverov XVI. zjazdu KSČ (The role of geography in implementing the worldview education conclusions of the XVIth Congress of the Communist Party of Czechoslovakia)
Přírodní vědy ve škole, 33, 1981-1982, No. 6, pp. 234--235. Lit. 8.

The author discusses the role of geography in implementing worldview education which follows from the documents of the XVIth Party Congress. Geography has a very important role in ideological education because of its subject-matter, through which pupils become acquainted with contemporary political and economic events throughout the world. The subject-matter of geography contributes to the forming of a dialectical and materialistic worldview, education towards socialist patriotism, proletarian internationalism and feelings of solidatiry with the working class of the whole world. A deeper knowledge of the USSR and the socialist countries extends feeling of friendship towards the socialist countries and the members of the Council for Mutual Economic Assistance. The forming of pupils´ideological stands in geography instruction has priority in the educational process. Unity between the teaching and educational components of geography instruction is the outcome of its systematic analytical and at the same time synthesizing comprehensive approach to the world and its components, in which all the categories of dialectical and historical materialism are reflected. This supports the development of pupils´ logical thinking. Components of this education include forming a relationship to the world and to society, a correct understanding of the basic laws of development of nature and society, a militantly critical attitude towards unscientific religious opinions and various predjudices, a correct attitude to work and its outcome, towards people, the collective, towards their socialist motherland and proletarian internationalism, responsibility for one's own actions and activities, a positive relationship towards beauty and art, towards physical culture and care of ones health. The author also discusses aesthetical hobby clubs in this context, and their various activities.

didactics of geography - geography instruction - education + scientific worldview - proletarian internationalism - Czechoslovakia. 147707.

6.8.2 Atheist education in geography instruction

26. MINISTERSVO PROSVESHCHENIYA SSSR:
Nauchno-ateisticheskoe vospitanie - sostavnaya chast kommunisticheskogo vospitaniya uchashchikhsya
(Scientific and atheist education - an essential component of the Communist education of pupils)
Geografiya v shkole, 49, 1982, pp. 44-52. Lit. 28.

The article is a methodological instruction on how to proceed in the implementation of atheist education of pupils in schools. In the introductory part an analysis of the existing situation is made concerning the work of teachers in this field of the USSR. Then the principles of the work of teachers in the area of atheist education in school are summed up. The third section is devoted to atheist work in the course of extra-curricula activities, which also requires working with pupils' parents. In conclusion a special section is devoted to work with religious pupils. These pupils can be divided into three groups. The first is formed by those pupils who are convinced of the existence of God and who go to Church because of their inner conviction and need. Working with them is difficult, because they do not like to participate in the collective life of the class. The second group are those who participate in religious ceremonies under the influence of family traditions and the third group are pupils who belive in the existence of a supernatural force, which influences the life of nature and human society. If they participate in religious ceremonies it is usually not because of religious reasons. The instruction recommends that teacher divide their religious pupils into these three categories, take notes on them and then on the basis of individual approaches to influence them in an unostensive manner. In the planning of atheist education teachers should base their activities on Soviet bodies and the recommendation of Party bodies and fully analyse the conditions for this type of education in their region or district. At the same time it is necessary to carefully verify the impact of various local religious influences, their most important characteristics, how they adapt to Soviet life and penetrate the family and also the causes of the religious feelings of pupils and their families.

didactics of geography - geography instruction - Communist education - atheist education - USSR. 147705.

6.8.3 Education towards socialist patriotism and proletarian internationalism in geography instruction

27. DRAGIEVA, E.:
Rolyata na ekspedicioniya otryad za patritichnoto vspitanie na uchenitsite (The role of an exploration club in the patriotic education of pupils)
Obuchenieto po geografiya, 25, 1982, No. 1, pp. 37-40.

The author describes the activities of the Dimitrov Exploration Club in the Kransk region, during which its members become acquainted with the natural and geographical characteristics of their native region and its glorious past. The plan of activities for the group was drawn up for a two-year period (1979-1981). The group was divided into 4 sections which each specialised in some specific subject-matter.The activities of the whole group were comprehensive: excursions alternated with lectures, discussions, literary and musical evenings, parties, etc. The activities of the group supervisors concentrated on celebrating the

1300th anniversary of the founding of the Bulgarian state.

didactics of geography - geography instruction - patriotic education - physical geography - field work - Bulgaria. 147707.

28. YORDANOVA, D.:
Patriotichnoto i prirodozashchitnoto vzpitanie na uchenitsite v processa na ekspedicionno-turisticheskata deynost (Patriotic education and education towards nature conservation of pupils in tourist and exploration activities)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 21-23.

An important component of gaining knowledge about the native region of pupils in the upper classes is their participation in hikes and explorative field trips. A plan of excursions described in the article includes such activities as pupils' observations and seeking various information. The pupils are usually divided into several groups with different tasks, such as studying measures taken for the conservation of the soil against pollution and erosion by water. Samples of soil are taken in the vicinity of the school and analysed. A second group studies flora and fauna conservation in the region, becomes acquainted with protected plants and animals and with the legal aspects of nature conservation. A third group studies the relief and geology of the region, while a fourth group works in the Vysoká Polana camp. The author describes in detail the activities of each group and stresses the need to directly link this type of activity with the everyday life of the region. This leads not only to more extensive knowledge on the part of pupils, but also to their awareness of the relationship between human activities ant the natural conditions of the region.

didactics of geography instruction - patriotic education - education + nature conservation - group instruction - field work - excursion - Bulgaria. 147707.

29. SAKHATCHIEV, Z.:
Vzpitatelniyat efekt ot isuchavaneto na rodniya kray v krshoka po geografiya (The educational effect of studies concerning the native region in a geography hobby club)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 17-21. 3 figs.

The education of the young generation in a spirit of patriotism is a task of first priority for our schools. One of the means of this education are studies by the pupils concerning the native region in a geography hobby club. The author concentrates on a discussion of the methods used by the teacher who supervises such a hobby club and describes the activities of such a club in the school year 1979-1980. The theme of the club's activities was "Our Region on the Road to Socialism". The pupils first collected various information and documents, then classified what they had gathered and prepared various graphs, statistical tables, surveys, etc., which concerned the development of agriculture, industry, forestry, a comparison between the development of automobile transportation under capitalism and under socialism, increases in the number of libraries and readers in the region, etc. Pupils held discussions on the subject-matter of their survey and also discussed some of the negative aspects of present developments, for instance the increase in the consumption of alcoholic beverages, environmental pollution, etc. All this increases their interest in the civic problems of the area.

didactics of geography - geography instruction - elective courses - regional geography - patriotic education - instruction media. 147717.

6.8.6 Aesthetical education in geography instruction

30. YALMOVA, V.:
Vazmozhnosti na geografiyata kato uchebem predmet za esteticheskoto vazpitanie na uchenitsite (The opportunities provided by geography instruction for the aesthetical education of pupils)
Obuchenieto po geografiya, **25**, 1982, No. 2, pp. 15-10.

The author sums up the opportunities provided by geography instruction for carrying out aesthetical education during geography instruction: 1) the creative work of the teacher in the preparation and implementation of a teaching lesson, 2) passing on to pupils correct knowledge concerning the laws of development of nature and society, 3) pointing out interesting objects concerning physical geography. The author analyses the work of the teacher from these points of view and stresses such aspects of aesthetical education as nicely arranged bulletin boards, maps, pictures, etc. when they are shown to pupils. In this way a feeling for what is beautiful can be cultivated. Also pictures, slides or transparencies of the landscape and beautiful natural objects lead to this objective.

didactics of geography - geography instruction - aesthetical education - Bulgaria. 147707.

31. MANDOVA-RUSINTSOVSKA, M.:

Po nyakoy problemi na esteticheskoto vspitanie na uchenitsite chres obuchenieto po geografiya (Concerning some problems of aesthetical education of pupils in geography instruction)

Obuchenieto po geografiya, 25, 1982, No. 6, pp. 8-12. Lit. 8.

Aesthetical education within the framework of geography instruction is based upon a correct understanding of the relationship between man and the environment. In learning about geographical objects and when learning geographical notions the teachers has a number of opportunities to show his pupils the beauty of natural processes, to develop their perception of nature and the harmony which exists in it. Geographical excursions provide an excellent opportunity for this type of education. But aesthetical education also includes the cultural aspect of the problem, learning about various places at home and abroad and the artists and works of art which exist there. Films and television have a special place in geography instruction because they can make an emotional impact upon pupils. Also other teaching media, such as maps, outlines, pictures, diagrams, etc. can have a positive impact in this context. Most important of all is the work of the teacher as an organiser and guide in the educational process, which also includes the aestherical aspect.

didactics of geography - geography instruction - aesthetical education - films - television - teaching media - environmental conservation - Bulgaria. 147707.

6.8.7 Education towards nature conservation and environmental control in geography instruction

32. DZHAMBAZOV, I.:
Vzaimodeystvie mezhdu prirodata i obshchestvoto v epokhata na nauchnotekhnicheskata revolyutsiya
(The relationship between nature and society in the era of the scientific and technological revolution)
Obuchenieto po geografiya, 25, 1982, No. 4, pp. 1-8.

Marxism places great importance on the natural environment for the socio-economic development of society. According to K. Marx natural resources can be divided into two groups: On the one hand the means of human existence and on the other hand the means of human labour. The latter type of natural resources are important for the development of human society at a lower level of its development. Gradually, with the development of productive forces, the importance of the first type of natural resources increase. Humanity is now entering a stage where the geographical environment and landscape are being changed. It is,however, incorrect to claim that with technological progress the dependency of man upon nature is decreasing. Already during the agricultural stage of development man greatly changed nature by introducing cultural crops and animal husbandry. More recently, this trend has increased by the introduction of chemicals into agriculture. During the present stage of the scientific and technological revolution man is becoming the main force of changes which are occuring in the biosphere. On the other hand man's adaptation to natural forces is slower and more difficult than to technical progress. For these reasons mankind must ask itself, whether it is possible to overcome the continuing degradation of the environment and the many dangers this brings with it. The ruthless exploitation of natural wealth in the capitalist countries has led the ecologists of these countries to make very pessimistic conclusions concerning environmental control; as for instance in the book by D. Medoy: The Limits of Growth. This author recommends as a solution to the ecological crisis slowing down socio-economic development. The ideas of some Western technocrats on the other hand stress the idea that the environment is becoming an artificial technosphere adapted to the needs of man. Socialist ecologists and economists have optimistic opinions concerning the possibility of regulating the relationship between the environment and human society. They assume that the active intervention of a highly developed society into natural processes will continuously improve and enrich the natural environment. Together with the Soviet scientists Vernadski they are of the opinion that maintaining correct proportions in the natural environment depends entirely on us.

didactics of geography - geography instruction - scientific and technological revolution - environmental conservation - Bulgaria. 147707.

33. FIMOSHINA, A.P.:
Vneklassnaya rabota po okhrane prirodi v selskoy shkole
(Extra-curricula nature conservation activities in a rural school)
Geografiya v shkole, 49, 1982, No. 1, pp. 46-48.

Extra-curricula activities take place in hobby clubs and in the upper classes of the school also in an elective subject called Nature conservation. These activities should be carefully planned to avoid a haphazard approach. The hobby club described by the author does various work, both in theory and practical activities. It has several sections - for hydrobiology, geology, landscape studies, botany and zoology. During the spring and summer, excursions for all sections are organised and information exchanged. Various sites are found and described which require nature conservation measures and the club discusses ways and means for carrying out these measures. The author cites a number of specific examples and also describes the help which pupils provided to an archeological expedition.

didactics of geography - geography instruction - hobby - club activities - nature conservation - environmental control - elective subject - USSR. 147707.

34. KELE, F.:
Výskum vzťahu žiakov k prirodnej zložke životného prostredia (A study of the relationship of pupils to the natural component of the environment)
Přírodní vědy ve škole, 33, 1981-1982, No. 5, pp. 195-197.
Lit. 7, 4 tab.

The author describes a study of the relationship of pupils to the environment. Not even the best of laws can really protect nature against the unwarrented intervention of man. In the educational and teaching process children should be taught to know the laws concerning nature conservation and to understand their function and purpose. The study included 461 pupils in the 6th class of basic school and was based on a questionnaire. Each pupil answered 8 questions for which he could gain up to 16 points, i.e. a maximum of 2 points per question. The pupils were divided into 4 categories according to the score they obtained, which expressed their positive attitude towards nature. Among the questions were those pertaining to an active interest on the part of parents towards nature, the frequency of time spent in a natural environment, nature-connected hobbies, hobby club activities, reading about nature, whether the pupil has his own books on nature, which interest of the pupil connected with nature has not found an outlet, the pupils preferences as far nature, sports and technology are concerned, etc. The questionnaire were supplemented with a series of controlled interviews. It was found that the largest number of children with interests in nature which have not found any outlet come from urban housing settlements. The existence of a positive attitude towards nature was confirmed in the majority of the children, as well as a willingness to participate in nature conservation measures and activities.

didactics of geography - geography instruction - environmental conservation - nature conservation - basic school - 6th class - questionnaire study - pupil + nature conservation - Czechoslovakia. 147707.

35. MATRUSOV, I.S.:
Oznakomlenie shkolnikov s materialami XXVI. syezda KPSS pri izucheniyi geografii v 5. - 7. klassakh
(Acquainting pupils with the documents of the 26th Congress of the Communist Party of the Soviet Union during geography instruction in the 5th to 7th classes)
Geografiya v shkole, 49, 1982, No. 2, pp. 25-29.

The 26th Congress of the Party to a great extent dealt with problems of the rational utilization of nature and its conservation. Pupils should become acquainted with the documents of the Congress. In the 5th class it is possible to make use of the section on ecology and the rational utilization of natural resources. In the 6th class the sections on geological prospecting and the discovery of new resources can be used and in the 7th class, political geography can be explained in the spirit of the ideas found in the Congress documents concerning the nature of international cooperation between the USSR and various types of countries. The teaching syllabus should be up-dated on the basis of reading the daily press. In the upper classes of basic school it is possible to develop a set of questions, which will force pupils to independently study the Congress documents.

didactics of geography - geography instruction - socio-economic aspects + CP of the USSR - nature conservation - basic school - 5th to 7th class - USSR. 147707.

36. MILANOVA, G.V. - RYACHIKOV, A.M.:
Rol geografii v reshenii problemi okhrami prirodi
(The role of geography in dealing with nature conservation problems)
Geografiya v shkole, 49, 1982, No. 4, pp. 11-15. Lit. 12.

In recent years nature conservation in the USSR has greatly flourished. Problems concerning nature conservation and environmental control have achieved an interdisciplinary aspect. Geographical analysis has become an important medium for these objectives. Geography is capable of providing information on natural conditions and resources, on the degree and quality of their exploitation and the laws of development of the natural environment. Geographers are able to determine the optimum territorial allocation of industry and agriculture, including resource potentials and the scope of the changes caused by man in the environment, as well as to forecast their impact on the environment. The authors cite several specific examples of how geographers can effectively cooperate with other specialists in the interests of conserving and creating a healthy environment in various regions of the country. In recent years a new specialization has been created in Soviet geography - construction geography - which combines a theoretical elaboration of the planned transformation of nature in relation to the effective utilisation of natural resources and the study of regional production complexes, as well as the territorial allocation of production which takes into account changes in the natural environment under the influence of anthropogenic factors.

didactics of geography - geography instruction - interdisciplinary relations - geography + nature conservation - environmental control - USSR. 147757.

37 ZAGOROVA, K.:
Usvoyavane na prirodozashchitni znaniya i vzpitavane na kommunisticheako otnoshenie ku prirodata
(Learning about nature conservation and education towards a Communist relation to nature)
Obuchenieto po geografiya, 25, 1982, No. 1, pp. 25-32.
1 tab.

In the school year 1980-1981 an experiment was organized in the 7th class which concerned a system of various activities aimed at nature conservation education. Within the framework of geography instruction this problem was stressed especially in the following topics of the teaching syllabus: "The relief of the continents" and "The biosphere". The outcome of the experiment indicates that these topics provide extensive opportunities for environmental control education, but that at the same time the process of learning the relevant knowledge and skills depends on the conditions which have been created, as far as active nature conservation work is concerned, as well as on coordination with extra-curricula, hobby club and other leisure-time activities. The article also contains the detailed plans of two teaching lessons on the following topics: "The influence of flowing water and "Plant communities". The plans also include a specification of teaching objectives, notions to be learnt and organisational measures, as well as teaching media, test questions and homework assignments. Problems concerning nature conservation and environmental control should penetrate all stages of the teaching process.

didactics of geography - geography instruction - basic school - 7th class - education + nature conservation - education + environmental control - experiment - Bulgaria. 147796.

6.8.9 Defence education

38. VENCÁLEK, J.:
Branný aspekt výuky zeměpisu v 6. a 7. ročníku základní školy (The defence aspect of geography instruction in the 6th and 7th class of basic school)
Přírodní vědy ve škole, 33, 1981-1982, No. 2, pp. 76-77.
Lit. 6.

Defence education is one of the components of geography instruction in the 6th and 7th classes of basic school. The new text books now in use have changed the quantitative aspect of this topic. Developing various topics from the point of view of defence of the country provides opportunities for the implementation of defence education. The teaching syllabus defines the scope and quantity of political and defence education.

The role of the teacher is extremely important in this context;the author cites a number of specific examples. The defence - related topics found in the geography syllabus include, among others, organizational measures taken to protect the population in case of war, means of attacks from the air, individual and collective defence systems, as well as shooting practice, communication and special physical training.

didactics of geography - geography instruction - basic school 6th and 7th class - defence education - ideological and political education - Czechoslovakia. 147707.

7.1.2 Instruction on the basis of examples and categories

39. SCHMIDT-WULFEN, W.:

Individualisierung oder Typisierung ? Zum Problem des exemplarischen Lernens von Unterentwicklungsprozessen

(The individual or the typical ? Concerning the problem of instruction on the basis of examples in the context of the topic underdevelopment and development processes) Geographie im Unterricht, 7, 1982, pp. 275-281. Lit. 15, 5 figs.

The problems of the developing countries of the Third World appear in various topics in geography instruction in all classes. However the textbook often fails to mention this aspect and individualizes each country to such an extent that a large number of details tends to obliterate the whole. The subject-matter concerning the developing countries should not be scattered into many details (for instance problems connected with the cultivation and sales of coffee, cacao or bananas), but only illustrated on the basis of examples which are typical and provide broad generalizations. The essence of the problem of underdevelopment has existed for many centuries and is connected with the penetration of European capitalism and colonialism (but not the "spirit of Europe", as some authors have attempted to explain). In this process social, economic and territorial structures are very important, since they have created positive conditions for European countries and obstacles and barrier to development in the underdeveloped country.

didactics of geography - geography instruction - secondary school - socio-economic aspects - regional geography + developing countries - instruction on the basis of examples - FRG. 147713-

7.1.3 Problem teaching

40.- GEBHARDT, S.:
Próby wykorzystania nauczania programowanego na lekcjach geografii w szkole podstawowej (Examinations with the use of programmed teaching in geography instruction in basic school)
Geografia w szkole, 35, 1982, No. 2, pp. 75-77. 4 tabs.

In the middle of the fifties Skinner and others developed the concept of programmed teaching. Specialists in the didactics of various teaching subjects all over the world were divided into those for and against this concept. Those who were for this concept considered it very important for achieving a high level of activity in pupils, their systematic work, self-control, acquiring knowledge in a systematic manner and the possibility of working according to the individual pupil's own speed. The opponents of this type of instruction claimed that educational work suffers, and that psychological, pedagogical and sociological aspects are not taken into account. They also pointed out that learning by writing clearly predominates in programmed teaching. The author of the article expresses a positive attitude toward programmed teaching and especially stresses the fact that the student can work according to his own speed. He then describes two geography lessons in the 7th class where the topic "Japan" is taught; the program makes use of an atlas and textbook.

didactics of geography - geography instruction - programmed teaching - secondary school - 7th class - regional geography + Japan - FRG. 147709.

41. SCHMIDTKE, K.D.:
Lernanreiz und Lernerfolg durch didaktische Strukturierung länderkundlicher Probleme. Die optimale Nutzung begrenzter Möglichkeiten in Dänemark (The attraction of learning and the success of learning by the didactical structuralization of geographical problems. The optimum utilisation of limited opportunities in Denmark).
Geographie im Unterricht, 7, 1982, No. 4, pp. 157-160. Lit. 18, 3 figs.

The author provides an interesting outline for teaching the geography of Denmark in the 6th class of technical secondary schools. His analysis indicates that Denmark has very few mineral resources, has a negative climate for agriculture, poor soil, but nevertheless achieves excellent economic results. The secret of Danish prosperity is in the activities of its people and the optimum utilisation of the limited opportunities provided by a physical shortage of resources. The economic handicaps of Denmark are compensated for by a favourable position as far as transportation is concerned, a highly skilled labour force, a high degree of specialization (the dairy industry, refrigerators, machines for the foodstuff industry, furniture), high quality arts and crafts (china, silver) and firms of a small and medium size with optimum abilities to adjust to changing conditions on international markets. The handicap represented by the climate and poor soil is compensated for by cultivating correct crops and by optimum fertilization, by modern methods of recycling agricultural waste and mechanization and by a high level of education among farmers,as well as by the existence of cooperatives in agriculture and an extensive network of counselling services for agriculture, which have led to success in animal breeding (pigs with an added rib).

didactics of geography - regional geography - socio-economic aspects - problem teaching - agriculture - Denmark - FRG. 147713.

7.6 Geographical syllabi and curricula

42. Diskusia k novým osnovám biologie, chemie a zemepisu pre gymnázia (A discussion on the new biology, chemistry and geography syllabi for general education secondary schools)
Přírodní vědy ve škole, 33, 1981-1982 No. 6, pp.202-207.

The Ministries of Education of the Czech and Slovak Socialist Republics have submitted for discussion the draft of new teaching syllabi for biology, chemistry and geography for the first and second classes of general education secondary schools, which have been prepared on the basis of the document concerning the further development of the Czechoslovak teaching and educational system; the new syllabi are now being verified in selected schools. The article provides characteristics of the new syllabi for individual teaching subjects, including geography, which has been drawn up by the Research Institutes for Pedagogics in Prague and Bratislava. It also provides the full text of the teaching syllabus for the 1st and 2nd classes of general education secondary schools. In geography, pupils should learn selected facts, notions, terms, rules and regulations concerning processes in the landscape, their components and parts, terminology, symbols and terminology of the geographical sciences. The syllabi for the 1st class and for the 2nd class are cited in full in the conclusion of the article: geography takes up 3 weekly lessons, i.e. 99 lessons per school year in the 1st class and 2 weekly lessons, i.e. 66 lessons per school year in the 2nd class. In the first class the syllabus contains an introduction to geography (12 lessons), physical geography (36 lessons), socio-economic geography (38 lessons), the interaction between the physical and socio-economic (12 lessons). In the 2nd class 10 lessons are devoted to cartography, 20 lessons to the political and economic geography of the world, 31 lessons to the geography of Czechoslovakia and 5 lessons are devoted to geographical excursions. The article also includes instructions for the supervision of the educational and teaching process.

didactics of geography - geography instruction - secondary school - 1st and 2nd class - teaching syllabi - educational objectives - Czechoslovakia. 147707.

43. DOUBRAVA, J.:

Zeměpis v 6. ročníku (Geography in the 6th class)
Přírodní vědy ve škole, 33, 1981-1982, No. 1, pp.28-30.

In the school year 1981-1982 a new teaching syllabus for geography in the 6th class is being introduced and assessment of the effectiveness of instruction, teaching and learning, as well as the work of pupils and teachers will be carried out. The author points to some important open question in this area. In teaching the geography of the continents and oceans methods should be found to achieve the desired educational and teaching effect, while at the same time taking into account the specific aspects of individual pupils and the opportunities open to the teacher. The author also discusses teaching media used in the 6th class, as well as the textbook for this class and how it is linked to the textbooks for the preceding and subsequent class. The problem of maps is discussed separately. A still unsolved problem is the scope and amount of subject-matter to be taught, in view of defined educational objectives.

didactics of geography- geography instruction - basic school - 6th class - teaching syllabus - teaching media - textbooks - maps - Czechoslovakia. 147713.

44. HUNT, J.:

Geography and the 11 - 16 Curriculum Survey
Teaching geography, 7, 1982, No. 3, pp. 99-102.

A recent conference of teachers held in Yorkshire concerning the education of 11 to 16 year olds and the curriculum which would provide an optimum education for them, defined 8 areas on which teachers should concentrate and which in the opinion of the participants in the conference make a maximum contribution to the development of pupils in this age group: aesthetical and creative aspects, ethical aspects, language aspects, mathematics, physics, science, socio-political aspects and mental aspects. The author then discusses geography instruction from the point of view of these aspects, and demonstrates how each of them is relevant to the subject-matter of geography. He also deals seperately with the problem of so-called geographical skills which a pupils should learn.

didactics of geography - geography instruction - teacher + geography - conference - basic school - secondary school - educational and teaching objectives - USA. 147705.

45. KHRISTOV, T. - KMECHEV, D.:
Za novite uchebni planove na espu i myastoto na geografiy v tekh (Concerning the new experimental curriculum and the position of geography in it)
Obuchenieto po geografiya, 25, 1982, No. 5, pp. 4-7.

The authors criticize a new school curriculum in which geography, according to their opinion, is overlooked as a teaching subject. They stress the importance and significance of geography as a general education teaching subject, especially from the point of view of the education of a socialist person. They ask that geography be introduced also into the final class of elementary school. It should also be in the curriculum of the 10th class where it would be best to divide the geography of Bulgaria into two independent units: physical geography and economic geography. They also stress the need to enlarge the number of elective subjects in the temporary curriculum, which is now used.

didactics of geography - geography instruction - curriculum - criticism - Bulgaria. 147707.

46. Bolshe vnimaniya usovershenstvovannim programmam (Greater attention to the improved curriculum) Geografiya v shkole, 49, 1982, No. 2, pp. 29-31.

Since 1981-1982 improved versions of the teaching syllabus have been introduced. The changes in many cases have the aim of doing away with the overloading of pupils with work. The main trends in the new concept can be summed up in the following: 1) improving the ideological and educational potential, 2) greater stress on the ideological impact of the syllabus, 3) stress on polytechnical aspects of education and better preparations for making a vocational choice, 4) the simplification of inessential subject-matter. Teachers are also given greater freedom within the framework of the teaching syllabus, greater stress is placed on interdisciplinary aspects and the syllabus also contains methodological instructions for the teacher, including recommendations for the use of various teaching media and methodological literature. Stress is placed on the objective of teaching pupils to study independently. Also standards for marking are set, to overcome subjective assessments of individual pupils.

didactics of geography - geography instruction - modernization + instruction - teaching syllabus - communist education - polytechnical education - interdisciplinary relations - teaching media - USSR. 147707.

47. INSTYTUT PROGRAMÓW SZKOLNYCH:
Aneks do instrukcji programowej dla szkoly podstawowej geografia - klasa IV (Additional instructions concerning the 4th class geography teaching syllabus in basic school)
Geografia w szkole, 35, 1982, No. 5, pp. 225-226.

Because of changes in the curriculum for the 1st to 3rd classes of basic school, changes have now been introduced in the geography teaching syllabus for the 4th class. The Institute for School Curricula and Syllabi here provides additional information for teachers concerning these changes. The topic "The close vicinity of the school" has a new outline for 20 to 25 lessons. Also new assignments for observations and field trips such as observations and recordings of the weather, a description of the weather in the course of the day and year, observations of the movement of the sun, the horizen, orientation outdoors with the aid of the stars, the sun and a compass, the variety of the natural terrain, etc. have been included. Also learning to use a map has changed, some parts of the previously used syllabus have been deleted, while greater stress is now placed on practical reading from a map.

didactics of geography - geography instruction - basic school - 4th class - teaching syllabus - Poland.
147707.

48. KOBALEVSKAYA, M.K.:
Usovershenstvovannaya programma po geografii dlya sredney shkoli (The improved curriculum for secondary schools)
Geografiya v shkole, 49, 1982.

Since the school year 1981-1982 geography teachers have been using new teaching syllabi. Some more extensive changes have been carried out which are connected with the tasks which the 26th Congress of the Communist party of the Soviet Union formulated and which are the outcome of new findings of scientific geography. The new teaching syllabi stress the educational impact of instruction and to a much greater extent leads pupils towards learning practical skills. Fundamental changes have occured in practical experiences. Also interdisciplinary relation towards history, biology, physics and other subjects are stressed to a greater extent. Sections of the syllabus which concern standards for marking pupils are being introduced for the first time. Also recommendations for the use of teaching media and methodological aids for teachers have been included in the syllabus for the first time. The article describes all these changed in detail.

didactics of geography - geography instruction - secondary school - teashing syllabus, modernization + geography instruction - USSR. 147707.

49. MAKOWSKA, D.:
Dotychczasowy a nowy program bau nauczania geografii w klasie V. (The existing and new geography teaching syllabus for the 5th class)
Geografia w szkole, 35, 1982, No. 3, pp. 122-127.

The existing geography teaching syllabus for the 5th class has been in use since 1963; now changes have been introduced which concern the concept and sequence of teaching some of the more general problems. The new syllabus for the 5th class was first published in this journal in 1981 (No. 4) and so now it has been in use for the second school year. The new syllabus is divided into 3 topics (the old one had 8 basic topics). The author compares the old and new syllabi and analyses these changes from a didactical point of view. She especially stresses the teaching of various skills within geography instruction.

didactics of geography - geography instruction - basic school - teaching syllabus - modernization + geography instruction - comparisons - learning + skills - Poland. 147707.

50. MINISTERSTWO OŚWIATY I WYCHOWYNIA, INSTITUT PROGRAMOV SZKOLNYCH:
Program szkoly podstawowej geografia klasa VI.
(The 6th class geography teaching syllabus for basic schools)
Geografia w szkole, 35, 1982, No. 4, pp. 165-167.

A group of authors led by Prof. Anna Dylikova has prepared a new geography teaching syllabus for the 6th class of basic school, which has been approved by the Ministry of Education on April 13th, 1982 for use in the school year 1983-1984. The article provides a survey of the main topics in the new syllabus which include Euroasia, a general survey of Europe, a general survey of Asia, a survey of the USSR, Czechoslovakia, the GDR, Hungary, Rumania, Bulgaria, Yugoslavia, the socialist countries as a whole, FRG, France, the Benelux countries, Great Britain, Switzerland and Austria, Italy, Scandinavia, the socialist countries of Eastern Asia, Japan, India and the Asian countries of the Near East. The syllabus also contains an enumeration of the basic skills which pupils should learn in geography.

didactics of geography - geography instruction - basic school - 6th class - teaching syllabus - topics - learning + skills - Poland. 147707.

51. Uzasadnienie zmian w programie nauczania geografii w klasie VI szkoly podstawowej (An explanation of the changes in the geography syllabus for the 6th class of basic school)
Geografia v szkole, 35, 1982, No. 4, pp. 168-169.

Poland is now undergoing a reform of basic ten-year school general education. The new curriculum places geography into the 6th to 8th classes and one geography lesson per week has also been included into the 9th class, where global economic, political and population problems are taught. While in the 6th and 7th classes the stress in on physical and economic geography, the 8th class is devoted to regional geography. The article explains the reasons for the various changes which have been carried out. The teaching syllabi for the upper classes are still in the preparatory stage.

didactics of geography - geography instruction - basic school - teaching syllabi - changes + teaching syllabi - Poland. 147707.

7.9 Modernization endeavours in geography instruction

52. MARGARITOV, S.:
Povishavane efektivnosta na obuchenieto po geografiya na osnovata na novoto uchebno sdrzhanie v V - VIII klas (Increasing the effectiveness of geography instruction on the basis of the new content of teaching subject-matter in the 5th to 8th classes)
Obuchenieto po geografiya, 25, 1982, No. 1, pp. 13-17.

Improving the effectiveness of geography lessons assumes the following preliminary preparations:
1) dividing the teaching subject-matter into individual

lessons; 2) deletion of unimportant subject-matter; 3) the improved structuralisation of teaching subject-matter; 4) the formulation of problems to support creative thinking in pupils; 5) stressing the research aspects of the subject-matter taught. The author discusses the subject-matter taught in the 5th to 8th classes in geography from these points of view, points to shortcomings which can often been seen and cites examples of how some topics can be utilized for improving the effectiveness of the teaching process.

didactics of geography - geography instruction - basic school - teaching syllabi + 5th to 8th classes - effectiveness + instruction - preparations + teaching lesson. 147715.

53. STEYER, U. - HERRMANN, H.:
Einführung in den lernzielorientierten Erdkundunterricht - Modell einer Elterninformation (An introduction to geography instruction orientated to learning objectives - a model of information for parents) Geographie im Unterricht, 7, 1982, No. 1, pp. 34-37. Lit. 7m 2 figs.

The authors here recommend that parents become acquainted with the new concept of geography instruction in secondary schools (the 5th to 10th classes). They here provide the outline of a 15 minute paper to be presented to parents where they show that this new approach includes more topography, which is taught by more modern methods. The new teaching syllabi are also more adequate to the age of the pupils. A study has shown that instruction according to the new syllabi and new textbooks has led to the improved knowledge of pupils.

didactics of geography - geography instruction - secondary school - 5th to 10th classes - modernisation + geography instruction - information + parents - FRG. 147713.

8.8 The didactical principle of taking into account interdisciplinary relations

54. MALAKHOV, H.V.:
Meshpredmetniye svyazi v formirovanii nekatorikh geograficheskikh ponyatiy (Interdisciplinary relations in the forming of some geographical notions) Geografiya v shkole, 49, 1982, No. 5, pp. 39-40.

The article contains some recommendations for utilising the relation between geography and mathematics in the 5th and 6th classes, when the notion of scale is explained in connection with map reading. Here the teacher should base his explanation on what the pupils have already learnt in mathematics in the 4th and 5th classes. It is best to first discuss this approach with the relevant mathematics teacher. References to the mathematical aspects of scale will facilitate pupils' estimates of distance on a map, using a map and drawing a simple map during field trips or excursions.

didactics of geography - geography instruction - basic school - 5th and 6th classes - interdisciplinary relation + mathematics - cartography - scale - organizational form - excursion - field work - USSR. 147709.

55. MALAKHOV, N.V.:
Mezhpredmetniye svyazi v rabote s kartoy v kursakh geografii i istorii (Interdisciplinary relations in work with a map in geography and history lessons)
Geografiya v shkole, 49, 1982, No. 1, pp. 43-44.

The author describes the usefulness of a uniform approach to work with a map in both history and geography. In the lower classes the beginner makes errors which must be overcome in both teaching subjects; pupils must learn to calculate the size and distance of various objects on a map by understanding the scale of the map. Later, in geography they learn that many types of maps exist and that historical maps are only one form of thematic maps. In the upper classes an interesting subject is a comparison between various old maps and their modern equivalents.

didactics of geography - geography instruction - interdisciplinary relation - history - work with a map - USSR - 147713.

56- VODENICHAROVA, V. - KAMENOV, I. - IVANOVA, A. - GEORGIEVA, I.:
Mezhdupredmetnite vrzki v obuchenieto po obshcha fizicheska geografiya v sedmi klas (Interdisciplinary relation in teaching general physical geography in the 7th class)
Obuchenieto po geografiya, 25, 1982, No. 2, pp. 30-38.

The subject-matter taught in physical geography in the 7th class provides numerous opportunities for the implementation of interdisciplinary relations with subjects among the natural sciences and with mathematics. A group of teachers in the district of Vidin organized a study project to determine the specific opportunities open in this direction. For this purpose a special didactical elaboration of the problems studied was undertaken.

didactics of geography - geography instruction - basic school - 7th class - physical geography - interdisciplinary relation - study project - Bulgaria. 147713.

9. Geography instruction methods

57. SHCHENEV, V.A.:
O gruppirovke priemov uchebnoy raboti uchashchikhsya v kursakh fizicheskoy geografii (On the classification of methodological procedures used in teaching pupils in physical geography lessons)
Geografiya v shkole, 49, 1982, No. 2, pp. 32-37.

The improved version of the teaching syllabus stresses not only the attainment of geographical knowledge, but also skills. The author divides methodological approaches into several categories: 1) procedures which aim at the content of geographical knowledge, in the lower classes descriptions of phenomena and objects predominate, while in the upper classes characteristics which make use of logical relations and logical analysis, 2) procedures connected with various methods of geographical work, for instance observations outdoors and/or meteorological observations or the use of a map, etc., 3) teaching procedures selected according to the source of geographical knowledge (for instance a word, a teaching medium, practical activity); the author also deals in detail with work involving a textbook and other teaching media, 4) procedures aimed at the development of the pupils´ intellect (defining relations of cause and effect, making comparisons, classifications, generalisations, etc.). Logical procedures have, however, been developed least of all in the improved version of the teaching syllabi.

didactics of geography - geography instruction - logical procedures - teaching media - teaching methods - physical geography - USSR. 147709.

9.4 The method of coherent exposition

58. KOHLMANN, R.:
Schülervortrag im Geographieunterricht der Abiturstufe
(Papers presented by pupils in the course of geography instruction in the final class of secondary school)
Zeitschrift für den Erdkundeunterricht, 35, 1982, No. 1. pp. 20-27.

The author stresses the importance of work in the final class of general education secondary school which is terminated by a school-leaving examination. Papers prepared and presented by pupils can be an important form of independent work. On the basis of specific examples he shows the high quality of work which can be achieved in this manner and cites a number of assignments which can be given to pupils. In conclusion the author discusses how to assess papers presented by pupils - both from the point of view of their content and their formal presentation. This method of work brings pupils the self-confidence and skills they will need at the university.

didactics of geography - geography instruction - secondary school - presentation of paper + pupil - GDR. 147713.

9.5 Discussion methods

59. KOHLMANN, R.:
Die Unterrichtsdiskussion im Geographieunterricht der Abiturstufe (Discussions in the course of geography instruction in the final class of secondary school)
Zeitschrift für Erdkundeunterricht, 34, 1982, No. 2-3, pp. 83-89.

The author considers discussions in geography teaching to be a highly demanding form of basic instruction. He shows how geography instruction which concentrates on a specific subject can have a very high quality when discussions are introduced. He describes the necessary prerequisites for the use of this method and recommends also that the formal seating order usually used in class be changed and that pupils sit in a horseshoe formation, so that all participants in the discussion are of equal status. This also creates a better atmosphere for the discussion.

didactics of geography - geography instruction - secondary school - teaching method + discussion - classroom - GDR. 147719.

9.6 Methods of work with literature, textbooks, the teaching-syllabus,workbooks, worksheets, atlases and maps

60. BILOYS, M.D.:
Obuchenie uchashchikhsya priemam sostavleniya shem po tekstu uchebnika (Teaching pupils on the basis of making outlines according to textbooks)
Geografiya v shkole, 49, 1982, No. 5, pp. 43-52.
6 outlines.

The successful implementation of the new improved geography teaching syllabus helps to develop pupils' intellect abilities. A good medium for activating pupils are assignments in which pupils make either oral or graphic outlines. The author cites examples which concern the topics "Various parts of the Earth", "Types of rocks", "The creation of islands", etc. The author recommends the use of graphic outlines when explaining the influence of ocean currents upon the weather or when explaining how the weather depends upon the position of mountain peaks. Pupils supervised by the teacher gradually learn to make outlines themselves which in a clear manner show the causes of some physical geography phenomena.

didactics of geography - geography instruction - teaching syllabus - teaching methods - work with textbook - geographical outline - USSR. 147711.

61. GROZDEVA, E.:

Kak rabota s uchebnika po geografiya v osmi klas

(How to use the geography textbook in the eight class)

Obuchenieto po geografiya, 25, 1982, No. 4, pp. 15-19.

Geography is a teaching subject with varied subject-matter. Pedagogical theory and practice assume the use of varied organizational forms and methods of instruction. One highly effective teaching method which can be used in the form of independent assignments, is the use of the textbook by pupils. The regular inclusion of this method into classwork assumes detailed preparations by the teacher. Already in the first teaching lesson the teacher should point out the authors of the textbook and how the subject-matter to be learnt is arranged in the textbook. In subsequent lessons opportunities should be found to include pupils´ independent work with the textbook. As an example the author cites the textbook for the 8th class and provides recommendations on how to use the text in question. Typical assignments can for instance be to draw conclusions from statistical or cartographic data found in the textbook (for instance make a diagram concerning the territorial allocation of the machine industry). Here a diagram can become the point of departure for pupils´ independent work. Another method of using the textbook are questions prepared by the teacher which the pupils can answer by reading the textbook. It is important that all work with the textbook contribute to the independent work of pupils and their solving of practical assignments.

didactics of geography- geography instruction - basic school - 8th class - teaching medium - textbook - teaching method diagram - Bulgaria. 147709.

62. KRAZHIMSKIY, Y.G.:
Rabota s uchebnikom kak sredstvo povisheniya kachestva znaniy, umeniy i navikov uchashchikhsya. (Work with the textbook as a means of improving the quality of pupils´ knowledge, skills and habits)
Geografiya v shkole, 49, 1982, No. 4, pp. 40-41. 1 tab.

One of the ways to improve the quality of pupils´ knowledge is to regularly organize their work with a textbook and atlas during geography lessons. The textbooks now in use, such as the The Economic Geography of the USSR for the 8th class,provide a number of opportunities for this type of classwork. The article describes the author's own experiences when teaching the topic "The Volga valley region". She first explains the terms economic region and energy production cycle and the factors which influence the allocation of industry to various territories; next the political division of the area is studied according to a map. A discussion follows in which pupils derive an economic description of the area on the basis of information found on the map. This is supplemented by information from the textbook concerning the number of inhabitants, nationality composition, types and size of settlements, etc. Also a diagram in the textbook concerning energy production cycles is studied. In the final part of the lesson pupils answer various questions.

didactics of geography - geography instruction - basic school - 8th class - instruction methods - work with textbook - regional geography - socio-economic geography - USSR. 147709.

63. MUKAZHANOVA, A.:

Rabota s uchebnikom pri isuchenii rasdela "Gidrosfera" v 5. klasse (Using the textbook in teaching the topic "The hydrosphere" in the 5th class)

Geografiya v shkole, 49, 1982, No. 1, pp. 44-45.

Since pupils in the 5th class have their first encounter with physical geography it is necessary to devote attention to their learning how to properly use the textbook when seeking answers to questions and also how to place the text into the context of a map, illustrations and graphs. On the basis of the example of the hydrosphere the author demonstrates how the teacher can systematically lead his pupils towards work with a textbook. Also analyses of pictures and graphs found in the textbook can be made use of, as well as making notes on the margin of the textbook and making an outline of the text. All this helps the pupil to effectively learn the subject-matter presented in the textbook.

didactics of geography - geography instruction - basic school - 5th class - teaching method - work with textbook - hydrosphere - USSR. 147709.

9.8 The experiment method

64. SCHMIDKE, H.D.:

Drei Hilfsmittel - ein Experiment (Three teaching aids - one experiment)

Geographie im Unterricht, 7, 1982, No. 7, pp. 282-288. Lit. 24

Experiments are rarely used in geography instruction. Teachers reject them because of the large amount of time they require and also because they require large amounts of material to carry out. However, the didactics if geography justifiably set a high premium on the use of experiments. The author therefore recommends the use of 35 different experiments which do not require too much time and require only three teaching aids. In both Germanies experiments in geography instruction are almost never carried out and are acknowledged only theoretically. The author cites various arguments against their use and rejects these arguments in a convincing manner. The 35 experiments the author recommends are briefly described.

didactics of geography - geography in struction - teaching method - experiment - FRG. 147711.

9.9 Other geography instruction methods

65. BISHOP, P. - JEANS, D.N.:
A Note on the Use of Some Elementary Quantitative Methods to Investigate Chenges in the Location of Orchards in the Evesham District
Teaching Geography, 7, 1982, No. 3, pp. 116-118. 4 figs.

A very interesting study which uses a number of maps of the Evesham district. The author compares maps from 1919 and from 1949-1950 and on the basis of simple quantitative methods shows how orchards have been moved from the downtown area of the town to its outskirts.The quality of the soil, the altitude of the land and distance from the centre of the town all influenced the new territorial allocation. These factors led to higher crops in comparison to the old site of the orchards, which also suffered from changed ecological conditions. This method can be used whenever historical maps are available to make comparisons.

didactics of geography - geography instruction - settlement geography - metod + teaching - field work - ecology - Great Britain. 147713.

66. HAMPL, F.:

Zkušenosti s využitím grafických metod při vyučování zeměpisu na gymnáziu (Experiences with the use of graphic methods in geography instruction in general education secondary schools)

Přírodní vědy ve škole, 33, 1981-1982, No. 5, pp.197-198.

The author describes his experiences of seven years when he extensively used worksheets in geography instruction. Worksheets are rarely used in general education secondary schools, in spite of the fact that they have a number of advantages. They are more popular among pupils than oral forms of examinations or the writing of essays and they activate and develop various aspects of pupils' personality. The author describes five different types of worksheets, including those where pupils are asked to express various statistics with the aid of graphs, make cartograms expressing the spatial distribution of various geographical phenomena, make surveys of geographical characteristics of various countries or areas, etc. The author used one or two worksheets every month. This type of work also has a positive effect on pupils' knowledge and increased their activity during schoolwork; also their map reading abilities improved. Worksheets should of course be used together with other forms of teaching aids.

didactics of geography - geography instruction - general education secondary schools - worksheets - graphic methods - cartegrams - graphs - Czechoslovakia. 147709.

67. MORDAWSKI, J.:
Metody rozwiazywania zadań geograficznych (cześć I.)
(Methods of solving geographical problems - part I.)
Geografia w szkole, 35, 1982, No. 2, pp. 68-73. Lit. 8.
4 figs.

One of the basic expressions of a pupil's activity (and that of people in general) is the ability to solve problems. The most important question in solving a problem is the choice of the most rational method. The auther distinguishes two methods of solving problems - by an algorithm or heuristically. Both methods are illustrated by the solving of various geography problems. In solving complicated practical (operational) problems an algorithm or semi-algorithm method is usually used, while simple problem-solving is dealt with heuristically. In the author's opinion, algorithm problems should predominate in geography instruction since this makes learning easier and teaches pupils correct intellect operations. An algorithm should be correct, specifically defined and generally valid. Semi-algorithm methods are similar but with their use we do not always obtain correct results. The process of creating algorithms takes place through the use of heuristic methods. Algorithms not only make thinking easier, but often make it possible at all. Their use is something pupils should learn.

didactics of geography - geography instruction - science methods - method + algorithm- heuristic method - problem method - Poland. 147709.

68. MORDAWSKI, J.:
Metody rozwiązywania zadań geograficznych - część II
(Methods of solving geographical problems - part II)
Geografia w szkole, 35, 1982, No. 3, pp. 127-133.

Here the author discusses heuristic methods, their characteristics and the objective they have in geography instruction. The author explains how geography can be taught on their basis. However, in comparison to algorithms, heuristic methods in teaching are unreliable and do not have sufficiently developed logical steps. The author first defines the problem (difficulties of a theoretical or practical nature whose solution should be the outcome of the pupil´s activity), and then recommends the greater use of problem teaching. As an illustration, a study of the changes in temperature and rainfall which take place in the course of the year at a specific place in South America are examined heuristically. The pupils are given problems to solve, they formulate hypotheses, verify them and on the basis of reduction assessments they seek the causes of a phenomenon. The author explains how to use heuristic method in such a way that they fulfill expectations and lead pupils to independent thinking and seeking solutions to problems.

didactics of geography - geography instruction - heuristic method- problem method - regional geography - Poland. 147709.

10. Geography instruction media

69. BARISHEVA, Y.A.:
Naglyadnie sredstva pri izuchenii materialov XXVI. syezda KPSS (Ostensive media in teaching about the documents of the 26th Congress of the Communist Party of the Soviet Union)
Geografiya v shkole, 49, 1982, No. 6, pp. 53-55.

Plakat publishers have published ostensive teaching aids which can be used when explaining the significance of the 26th Congress of the Communist Party of the Soviet Union. The development of the economy and increases in the well-being of the Soviet people in the 11th five-year plan have been expressed by sets of various posters and bulletin boards. Many of them are large enough to use in class; they include for instance the following: "The plans of the Party are the plans of the people", "The 11th five-year plan - an essential part of the economic strategy of the Party", "Well-being, the main objective of the Party", "Economic growth in the Union Republics", etc. Besides pictures, these materials also contain figures and cartographic diagrams. Also various slide series are available for this purpose and film lending services offer films concerning the 26th Congress of the Party. Also a number of television programs have been made on this topic. The teacher should recommend them to his pupils and the next day discuss them in class.

didactics of geography - geography instruction - communist education - teaching media - 26th Congress of the Communist Party of the Soviet Union - USSR. 147711.

70. EICHLER, G.:
Erdkundenunterricht (Media in geography instruction)
Geographie im Unterricht, 7, 1982, No. 2, pp. 41-46.
Lit. 18, 2 figs.

Geography teaching media represent a mediator between reality and the reciever of the information; in other words they are a means of communication. In school they represent a means of carrying out the teaching objective which can be achieved more effectively by their use. They acquaint pupils with reality and by the information they provide they open new horizons for them. Instruction with teaching media changes the role of the teacher from the carrier of information to a helper in processing and suppling information provided by the media. Thus the media can weaken the information monopoly which the teacher previously had, while at the same time increasing the activity of the pupils. The supply of information provided to pupils is thus distributed and comes from various sources, which makes it easier to learn. Instruction based on suitably chosen media thus approaches natural situations outside the school. In geography instruction, teaching media usually imitate natural objects, in contrast for instance to biology where natural objects can be used directly. The author examines in detail various types of media and assesses their significance and use for geography instruction.

didactics of geography - geography instruction - teaching media - activity + pupil - FRG. 147711.

71. NEHLSEN, F.:
AV-Medien zum Thema "Dritte Welt" - eine Übersicht
(Audiovisual media on the topic "The third world" - a survey)
Geographie im Unterricht, 7, 1982, No. 6, pp. 253-256.

A list of another 274 items of audiovisual didactical aids which all concern the topic cited in the title, for use in geography teaching.

didactics of geography - geography instruction - teaching media - audiovisual media - regional geography - third world - FRG. 147711.

10.3 Globes and models for geography instruction

72. TYWONSKI, K.:
Pomoce dydaktyczne do opracowywania rożnicy czasu na Ziemi oraz zmiany daty na 180° długości geograficznej
(Didactical aids to explain the difference in time on Earth and the date line on the 180 degrees longitude)
Geografia w szkole, 35, 1982, No. 5, pp. 243-245.
4 figs.

Problems concerning changes in time around the world are taught in the 5th class of basic school and in the 1st class of secondary school. The author recommends the use of a teaching aid which can be used together with a globe (the Northern hemisphere is sufficient to create a clear notion of the variability of time at various places on Earth). A 5 to 10 cm paper band is attached to the globe with lines every 15 degrees which represent 1 hour; one degree represents 4 minutes. The pupils then use either two small airplane or steamship models of different colour. Another band of paper show the time, so that when the airplanes or steamships are moved over the globe, the pupil can precisely determine either a loss or a gain in time.

didactics of geography - geography instruction - basic school - secondary school - teaching medium - globe - time zones - Poland. 147711.

10.3.1 Films

73. NEHLSEN, F.:
AV-Medien zum Thema "Dritte Welt" - eine Übersicht (Audiovisual media on the topic "The third world" - a survey)
Geographie im Unterricht, 7, 1982, No. 7, pp. 291-294.

The continuation of a list of audiovisual media (pictures, slides, films, transparencies, tape recordings, cassette films, tape cassettes, etc.) which concern the countries of the third world. The list includes 195 items and cites the producer or publisher of each.

didactics of geography - geography instruction - instruction media - regional geography + developing countries - FRG. 147711.

74. PAUZOVÁ, A.:
Filmy pro zeměpis v 6. ročníku ZŠ (Geography films for the 6th class of basic school)
Přírodní vědy ve škole, 33, 1981-1982, No. 2, pp. 79-80.

The author lists films which are suitable for screening in geography lessons in the 6th class. They include the films Leningrad, Arkhangelsk, Pictures of Siberia - 2 parts, Norilsk, Kamchatka, Moscow, Gorkiy - a Soviet Town, Kuybishev on the Volga, Volgograd -

a Town of Heros, The Latvian SSR, the Estonian SSR, the Lithuanian SSR, Kharkov, Kiev, The Soviet Black Sea Coast, the Great Caucasus and Bukhara, Samarkand and Tashkent. The author cites the precise time of each film and provides its brief description.

didactics of geography - geography instruction - basic school - 6th class - teaching medium - film - regional geography + USSR - Czechoslovakia. 147711.

10.3.2 School television and radio programs

75. KOCH, R.:
Eingriffe in den Naturhaushalt: Beispiel Oberrhein
(Interventions into the natural environment - the example of Oberrhein)
Geographie im Unterricht, 7, 1982, No. 5, pp. 199-202.
5 figs.

The author describes a TV serial for school geography teaching which deals with the intervention of man into nature and the consequences this has. The series concerns specifically the upper Rhine, the Assuan dam in Egypt and the Sahel region in Africa. These programs were broadcast in 1982 and 1983. The author describes them and demonstrates how they can be made use of in geography instruction, especially in the lower classes of secondary school. They show in a non-dogmatic manner that human intervention into nature, without taking into account all possible consequences, can have very negative consequences.

didactics of geography - geography instruction - secondary school - teaching medium - television + program - ecosystem - environmental conservation - FRG. 147711.

76. THOME, A.:
Geographisches "Schulfernsehen" in der DDR (Geographical "school television" in the GDR)
Geographie im Unterricht, 7, 1982, No. 5, pp. 203-207.
Lit. 11, figs. 2

The author provides information on the use of television for school instruction, specifically for geography teaching in the GDR. He analyses school programs which are related to geography and to civics. There are special programs for the 6th and 7th classes which concern the geography of the socialist countries, in colour, with special programs on Poland, Czechoslovakia, Hungary, Rumania, Bulgaria, Yugoslavia, and in the 7th class the geography of the USSR. The author positively assesses the educational and purposefully committed programs produced by GDR television in cooperation with the television companies of the other socialist countries. While stressing the positive aspects of the films, the author also mentions some drawbacks which are mostly connected with the timing of these programs to suit teaching lessons. If video-recorders were available, this drawback would not exist.

didactics of geography - geography instruction - basic school - 6th and 7th classes- teaching medium - television + program - FRG. 147711.

77. TYWOŃSKI, K.:
Jeszcze raz o telewizyjnych programach szkolnych w geografii (Once again on the subject of school television programs)
Geografia w szkole, 35, 1982, No. 4, pp. 183-188.

The author deals in detail with the didactical problems of using television programs in school geography instruction. He stresses the links between the geography teaching syllabi used in schools and television programs and describes several types of teaching lessons which make use of TV programs: more specifically the author deals with TV programs broadcast for the 4th and 5th classes of basic school, the quality of the commentaries of these programs, whether or not the films should be accompanied by music (the author expresses a negative opinion) and the links which exist between TV programs and excursions outdoors.

didactics of geography - geography instruction - basic school - 4th and 5th classes - teaching media - television + program - teaching method - Poland. 147711.

10.3.3 Pictures

78. PAUZOVÁ, A.: Nový obrazový soubor pro zeměpis / A new set of pictures for geography teaching/
Přírodní vědy ve škole, 33, 1981-1982, No.9, p. 360.

Schools have received a set of pictures by J. Bičík and J. Votýpka called Kavkazko (The Caucasians). The set includes 26 black and white, 28 colour photographs and 9 maps, as well as a commentary. The pictures show the Georgian, Azerbajani and Armenian SSR and the Southern part of the Russian Federation. The set is meant for the 6th class of basic School, but can also be used in general education secondary schools and secondary economic schools.

didactics of geography - geography instruction - basic school - picture - regional geography + USSR - Czechoslovakia. 147711.

10.3.6 Drawings

79. SCHMIDTKE, K.D.:
Faustskizzen zur Visualisierung des Strahlungsproblems
(Free sketches for the visualization of the problem of radiation)
Geographie im Unterricht, 7, 1982, No. 4, pp. 124-147.
Lit. 6, 24 figs.

To understand the weather and climate it is important to have a good understanding of solar radiation. In the course of instruction the difficulty in explaining this phenomenon is its high degree of abstraction, which concerns a number of factors which are not tangible. The author demonstrates how the problem of solar radiation and the radiation of heat off the surface of the Earth can be understood with the help of a drawing. Very often making a highly abstract notion concrete leads through the process of the visualization of the phenomenon. In this context sketches provide an easy method for providing an ostensive explanation for pupils. The whole problem is developed in 24 sketches.

didactics of geography - geography instruction - physical geography - solar energy - geographical sketch - FRG.
147711.

10.3.7 Photographies

80. **ČAPEK, R.:**

Interpretace leteckých a družicových snímků I.
(An interpretation of aerial and satelite photographs - I.)
Přírodní vědy ve škole, 33, No. 2, 1981-1982, pp. 72-75, 5 figs., 3 photographs.

Aerial and satelite photographs have thus far not been used in geography instruction. But since 1952 topographical maps are made with the help of aerial photography. Now a special subject is taught at the university, where also future geography teachers are trained, called "Remote sensing of the Earth", which specifically deals with aerial and satelite pictures of the Earth and a special textbook on the subject has been published by the author of this article (in 1978). Aerial and satelite pictures differ in a number of aspects. The author first describes the interpretation of aerial photographs taken from special aircraft (in Czechoslovakia from the Li-2 and Il-14), during the summer months at noon. Usually these photos are in black and white. This work is done by the Army Topographical Institute at Dobruška. Working with the pictures is not too complicated: each photograph size 18 x 18 cm shows an area of 20 km^2 and size 23 x 23 cm an area of 33 km^2. By combining the photos, a photomosaic is formed. When two cameras a specific distance apart photograph the terrain and then project the outcome with a stereoscope, a three-dimensional photograph of the terrain can be obtained. The identification of various objects in the photographs on the basis of interpreting various signs, shapes, sizes, shades, colours, textures, structures and positions of objects is very important. The author describes the process of photointerpretation of aerial photographs in detail and provides an example for the interpretation of aerial photographs by making sketches.

didactics of geography - geography instruction - teaching medium - photographs + airplane - interpretation + photography - Czechoslovakia. 147711.

81. ČAPEK, R.:

Interpretace leteckých a družicových snímků - II.

(An interpretation of aerial and satelite photographs - II.)

Přírodní vědy ve škole, 33, 1981-1982, No. 3, pp. 115-117.
1 fig., 4 photographs

The author here describes how the making of aerial and satelite photography is organised. There is no centralize institution in Czechoslovakia to deal with this type of work. On our territory we regularly receive satelite pictures from the Soviet meteorological satelite Meteor and from the Trinos - N satelite, belonging to the USA; these photos are not, however, used in geography because of their too small scale (1:10000000) and low distinguishing capacity of 1 to 3 kilometers. Receiving stations for the photos are in Prague-Libuš and at the Malý Javorník near Bratislava. Pictures taken from the Soviet space ships Salyut and Soyuz are more suitable for the purpose of geography, since their scale is 1 : 2500000 and they are multispectral photos. Otherwise the pictures made by the US Landsat satelite are used for geographical purposes; these can be bought for any territory in the world. The photos are on a scale of 1 : 1000000, 1 : 500000 and 1 : 250000. The author also describes in detail the different aspects of work based on satelite photos.

didactics of geography - geography instruction - teaching media - photography + satelite - interpretation + photography - Czechoslovakia. 147711.

82. ČAPEK, R.:
Interpretace leteckých a družicových snímků - III.
(An interpretation of aerial and satelite photographs - III.)
Přírodní vědy ve škole, 33, 1981-1982, No. 4, pp. 151-156. Lit. 21, 8 figs.

The author here brings examples of intepretations of satelite photographs. Usually an interpretation sketch is made on the basis of identifying various objects. The intepretation procedure is similar to that of interpreting aerial photographs. The author shows satelite pictures of central Slovakia, central Bohemia and their interpretation sketches. Aerial and satelite photographs have very broad applications. Here the author concentrates on geography instruction; they can be used for the country as whole or for various localities. Collections of these pictures should be supplied as an appendix to atlases and textbooks. Information on the use of these media in other countries is also provided.

didactics of geography - geography instruction - teaching media - photography + satelite - photography + airplane - interpretation + photography - Czechoslovakia. 147711.

83. GROMEK, E. - MYCKE-DOMINKO, M.:
Fotointerpretacyjne poligony szkoleniowe (Photographic interpretations of teaching polygons)
Geografia w szkole, 35, 1982, No. 1, pp. 31-34.

15 polygons for use in school geography instruction are available in the form of slides made on the basis

of aerial photographs of various areas of Poland. These polygons show the terrain at various time of the year on pan-chromatic film material. For now the following polygons are available: from the Lublin region with interesting geomorphological terrain for 36 km^2 in the form of 78 photographs on a scale of 1 : 10000, a Krakow polygon for 72 km^2, Bydgoszcz (70 km^2), Gdańsk (37,5 km^2), Poznan (65 km^2), for Warsaw and Skolimov, a polygon for Powsin (51 km^2), a polygon for Sobotka (250 km^2) and for a number of other towns in Poland. Each polygon contains important morphological details, including settlements and mines, etc. They serve for increasing the activity of pupils in class and are highly recommended.

didactics of geography - geography instruction - teaching media - aerial photography - Poland. 147711.

84. SANRIS, De, V.:
The Adirondack Park in New York State
Journal of Geography, 81, 1982, No. 4, pp. 152-153.

The author describes photographs of the Adirondack Park in New York State made in an infrared light by the Landsat satelite on a scale of 1 : 1000000. The pictures show the whole area in the southeastern part of Ontario and southwestern part of Quebec. The author describes various rivers, lakes, St. Lawrence Island and the Atlantic seacoast. He also describes the geomorphological development of the area and demonstrates the uses to which aerial photographs can be put in geography instruction.

didactics of geography - geography instruction - instruction media - photographs + satelite - USA. 147711.

10.3.8 Slides and slide series

85. SCHURER, J.:
Tam-Tam Musik Rhytmus. Westafrikanische Musik. Eine andere zugleich fächerübergreifende Einführung in westafrikanische Landeskunde (The rhythm of tam-tam music. West African music. A somewhat different and interdisciplinary approach to the geography of West Africa) Geographie im Unterricht, 7, 1982, No. 12, pp. 490-499. Lit. 55, 6 figs.

The use of texts, slides and films have become traditional in geography instruction, but the use of music recordings which illustrate the life styles, culture and society of distant nations is still in its beginnings. The author chose to supplement the teaching of the geography of Western Africa with samples of its music. The influence of this type of music on world musical development is generally acknowledged, especially in jazz. In Africa, however, this music is a social phenomenon, people sing during the harvest and during various social events and the music is usually combined with dancing. The author describes his selections from the music of Niger, Mali, Upper Volta and Chad.

didactics of geography - geography instruction - teaching medium - taped recording - music - Africa - FRG. 147711.

10.3.9 Diagrams, graphs, statistical tables

86. GLENN, W.H.:
Plotting the Analemma from Shadow Stick Observations
Journal of Geography, 81, 1982, No. 3, pp. 106-109.

The article deals with physical geography and specifically with the daily and annual declination of the sun. The author describes an analemma which is a graduated scale shaped like a figure eight that indicates the daily declination of the sun. The pupils can do the calculations themselves and set up a sundial of sorts. A stick is placed on a table and its shadow is measured. Measurements need to be carried out twice daily for the period of a year; when it is cloudy and measurements can not be taken, an extrapolation is possible. The asymetrical nature of tne plotted diagram indicates the annual movement of the sun.

didactics of geography - geography instruction - teaching medium - physical geography - movement + sun - model - USA. 147711.

87. KAISER, O.:
Entwicklung und Fähigkeit der Schüler bei der Arbeit mit Klimadiagram in den Klassen 6 bis 8 (Erfahrungsbericht)
(The development and abilities of pupils in working with climate diagrams in the 6th to 8th classes. Report on experience)
Zeitschrift für Erdkundeunterricht, 34, 1982, No. 4, pp. 140-148.

The author describes his experience with teaching the topic "The climate" where he systematically improved the quality of the pupils´ knowledge and skills. The focus of his attention are climate diagrams; on the basis of various examples he describes how the objectives of the teaching syllabus can be implemented. The examples are summed up in clear and understandable tables which concern terms usually used in weather forecasts. In conclusion the author provides a survey of his class work with weather tables and recommends them for use in geography education.

didactics of geography - geography instruction - basic school - 6th to 8th class - teaching medium - diagram - climate - GDR. 147711.

10.4 Atlases, maps and three-dimensional maps

88. BARKE, M.:

Beyond the Urban Growth Map: Suggestions for More Analytical Work in Urban Morphology

Teaching Geography, 7, 1982, No. 3, pp. 111-115. 8 figs.

Many geography teachers think that as far as urban geography is concerned it is sufficient to study the functional and social characteristics of cities, while entirely overlooking their morphology. But the morphology of cities and studies in changes taking place in structures often provide a deeper understanding of social and functional relations. The author recommends and cites a number of examples for the study of city suburbs, where the changing face of the city is much clearer than in the downtown areas which are almost without change. He cites the specific example of the city of Newcastle, whose morphology changes from year to year by the spreading of buildings at the edges, in combination with greenery. Such studies provide more a genetic than descriptive view and are very interesting for pupils.

didactics of geography - geography instruction - form of instruction - field work - settlement geography - city - Great Britain. 147711.

89. BERLYANT, A.M.:
Karty v literature (Maps in literature)
Geografiya v shkole, 49, 1982, No. 2, pp. 52-55.

The author stresses the importance of maps. They not only help the pupil to remember what he has learnt but also provide stimuli for new discoveries by the pupil. Maps are not only scientific documents but represent a component of human culture. The author discusses the links between painting and cartography and deals in detail with cartographic subject-matter in books, especially in fiction, for instance "map travelling" inspired by a number of authors. The article cites various passages from their memoirs, which document their attitude towards maps.

didactics of geography - geography instruction - cartography - map - interdisciplinary relation - art - USSR. 147711.

90. BICKENBACH, J. - KREIBIG, H. - SCHMIDT, R.:
Die mittelmasstäbige landwirtschaftliche Standartkarte 1 : 100 000 - Leistungs- und Planungsgrundlage der Landwirtschaft (Local agricultural medium scale maps of 1 : 100 000 - an aid for the supervision and planning of agriculture)
Petermanns geographische Mitteilungen, 126, 1982, No. 3, pp. 205-211.

Local agricultural maps in the GDR are important for determining production conditions (the soil, underground and surface water, the relief). Such maps serve to improve the information available concerning each site and thus are an aid for the management and planning of agricultural production. Maps of agricultural enterprises are made on a scale of 1 : 100 000 and they distinguish by colour water conditions and the quality of soils and show the relief of the land. An atlas of these maps contains 63 sheets which sum up an extensive study of the subject.

geography - cartography - map + agricultural enterprise - atlas - technical map - economic map - soil types - GDR.
147711.

91. GILMARTIN, P.P.:
The instructional efficacy of maps in a geographic text
Journal of Geography, 81, 1982, No. 4, pp. 145-150.
Lit. 14, 4 tabs., 2 figs.

The author reports on an interesting project designed to show whether maps in a geography text help towards the better understanding of the text. Maps and illustrations found in a geography textbook should increase the interest in the text and to extensively show something which is difficult to describe in words. Maps also provide information and they contribute to creating an emotional attitude towards the subjectmatter. Sometimes, however, maps and illustrations in a text do not have the required quality. The author chose 12 geography textbooks and from each of them 11 maps and specific information which accompanied them. 133 students were chosen from the University of Victoria aged 18 to 24 who were mostly in the freshman or sophomore year at college where they studied an introductory geography course. They were divided into three groups: the control group was given only the text in the textbooks to study, without the maps, the second group read the text accompanied by the maps, while the third used only the maps in the textbook accompanied by a text written on the basis of the textbook, but containing 2000 words on an imaginary continent (Mesoteria) and its imaginary geography. The students were asked to retell the text after 15 minutes of study and after one week had elapsed, they were asked questions. It was unequivocally found that maps help students to learn a text on geography, but that maps in themselves in no way increase the knowledge attained by the students. The findings also indicated a difference between men and women students.

didactics of geography - geography instruction - college-teaching medium - atlas - map - textbook + geography - teaching methods - work with textbook - work with map - study project - regional geography - USA. 147711.

92. KADZIOLKA, J.:
Nowoczesne nauczanie - nowoczesna mapa (Modern instruction - modern maps)
Geografia w szkole, 35, 1982, No. 1, pp. 29-31.

On October 7-9, 1981 an international conference was held in Budapest (Hungary) with the motto "Modern instruction - modern maps"; the conference was organised by the Hungarian Geodetic and Cartographic Society, the Hungarian Historical Society, the Hungarian Ministry of Agriculture and the Hungarian Pedagogical Institute. Representatives from West Berlin, Bulgaria, Czechoslovakia, Japan, the GDR and Poland were also present, besides many Hungarian participants. From Poland an 8 member delegation from the Institute of School Curricula and Syllabi, as well as representatives of various other specialised institutions were present. The geography section of the conference heard a total of 14 main papers, which made it possible to compare the quality of the didactics of geography in various countries, as well as the role ascribed to modern maps and atlases in contemporary geography instruction. In some countries the number of lessons devoted to cartography as a science have increased; for instance in Czechoslovakia this number has increased from 3 to 10. Attention was also devoted to the relation between geography as a science and a teching subject in schools, as well as the relation between scientific geography textbooks and those used in general education schools. Also such problems as the relation between wall maps and satelite maps, the unification of the symbols used in various types of maps, textbooks and pictograms, the simplification of symbols and the use of abstract symbols and their understanding by pupils were discussed. The Polish delegation was able to demonstrate the creation in Poland of modern textbooks and atlases: Polish schools now have available 3 different atlases for basic school and two for secondary schools, while geography teachers will soon have available three historical atlases. A team headed by E. Földi demonstrated the use of transparencies in Hungarian schools.

didactics of geography - geography instruction - modernization of instruction + geography - map - atlas - teaching media - conference - Hungary - Poland. 147711.

93. LIEBEROTH, I.:

Die Einheiten der neuen FAO-UNESCO Weltbodenkarte mit Zuordnung der Bodeneinheiten der DDR - Klassification

(New FAO - UNESCO units on a world map of Soils with GDR soil unit classification added)

Petermanns Geographische Mitteilungen, 126, No. 1, pp. 5-9, Lit. 10.

The new FAO-UNESCO world map of soils is excellently suited as a reference system for the classification of different types of soil. The article explains various diagnostic criteria for the classification of soil used in the GDR. From the point of view of its soil, the GDR can be divided into 16 units and these subdivided into a total of 46 units. The place of polyhydromorphous soil in this classification has proven to be a problem, as well as the demarcation between black soil and Phaeo-soil. Geographical soil classification, which should be carried out across the borders of different countries, is very important; the GDR and FAO-UNESCO designations of various soil types should be brought into agreement. The new FAO-UNESCO classification system is described in detail. The new world map is on a scale of 1 : 5000 000.

geography - cartography - agricultural geography - soil - soil types - FAO-UNESCO + pedological map - GDR. 147711.

94. MARTINOVICH, S.:

Az új Középiskolai Földrajzi Atlasz (A new geographical atlas for secondary schools)

Földrajztanítas, 25, 1982, No.4, pp. 114-118.

In connection with a new geography curriculum a new atlas has been published for secondary schools. The Hungarian Cartographic Publishers have begun to carry out an 8 year program for the creation and publication of new maps for schools. The program includes 3 new atlases and 23 new wall maps. The new atlas now published has the same size as the previous one, but 23 new pages have been added. Of the 31 maps taken over from the previous atlas, changes have been carried out in the colours representing the surface of the Earth.

didactics of geography - geography instruction - teaching medium - map - atlas - modernisation - Hungary. 147711.

95. METAG, H.:
Zur Wetterkarte im Fernsehen (On the weather map used in television programs)
Geographie im Unterricht, 7, 1982, No. 9, pp. 359-362.
1 worksheet.

The author here suggests a 4 lesson teaching unit concerning weather forecasting based on data from meteorological satelites which is provided by television in the Federal Republic and which includes an analysis of satelite photographs and a commentary concerning the forecast. The article correctly points out that to understand the forecast and the principles according to which it is made is possible only if pupils first learn basic terms and elements of meteorology and climatology. Geography instruction should create in pupils the ability to accept information concerning the course of the weather and to be able to make use of it for themselves. The author recommends that the satelite photographs shown on TV should serve as a point of departure for pupils' analysis.

didactics of geography - geography instruction - climatology - teaching lesson - physical geography - television - photography + satelite - learning terms + climatology - FRG. 147713.

96. MUCHA, L.:
Helwig, M.
Lidé a země, 31, 1982, No.   pp.

The first independent map of Silesia, the territory covering the upper and central Odra river valley, was created by an educator from Wroclaw named M. Helwig (1516-1574). His map is in the form of a large woodcutting, composed of 12 parts, 4 of which form a map and the rest are marginal decorations.

geography - cartography - History map - Silesia - Czechoslovakia. 147711.

97. MUCHA, L.:
Sebastian Münster
Lidé a země, 31, 1982, No. 11, p. 527.

Sebastian Münster was a cosmographer, cartographer, mathematician, astronomer, philologist and theologist who made a total of 142 maps. In 1536 he published in book form his Mappa Europae, a cosmography with instructions on the drawing of maps. He also added 12 new maps to the third edition of Ptolemy's Geographia, published in 1545 where one map shows Bohemia. This map was made in 1518.

geography - cartography - history of cartography - Poland - Czechoslovakia. 147711.

98. SANDNER, A. - BICKENBACH, J.:
Die Karte der Berechnungseignung 1 : 100 000 - eine Interprätationskarte zur mittelmassßbigen landwirtschaftlichen Standartkartierung (A map suitable for calculations on a scale 1 : 100 000 - an interpretation medium scale map for use in agricultural local mapping)
Petermanns Geographische Mitteilungen, 126, 1982, No. 1, pp. 53-56. Lit. 20, 2 tabs.

Agricultural local maps on a medium scale serve a useful purpose when series of more detailed maps of which there is always a shortage are made. The cartographic depiction of more detailed maps is shown on the example of a survey map of precipitation. The making of detailed agricultural maps is of great importance in the GDR for the management of agricultural enterprises and for land reclamation work. The detailed maps made on the basis of medium scale maps have a scale of 1 : 25 000.

geography instruction - geography - cartography - pedological maps - phytogeographical maps - agricultural geography - land reclamation - environmental control - GDR. 147763.

99. TYNER, J.A.:
Persuasive cartography
Journal of Geography, 81, 1982, No. 4, pp. 140-144. Lit. 11, 5 figs.

Various kinds of maps exist and some for propaganda reasons tend to distort individual elements in the map. The author here discusses the problem of the extent to which it is possible to manipulate individual elements in a map to make them more persuasive. Such manipulations were used for instance in Nazi propaganda, which used a purposefully chosen projection, situation and selection of data, symbols and texts in order to make a geo-political point. According to the wish of the cartographer, maps can be highly abstract or without a proper scale, thus distorting distances or they can use unspecified projections. Some maps tend to simplify too much or to use colours to distort reality or attract attention. The author presents interesting illustrations of how maps can be misleading or serve the purpose of distortion.

didactics of geography - geography instruction - teaching medium - map - cartography - map + propaganda - USA.
147763.

10.4.1 School bulletin boards, press clippings

100. FRELICH, J.:
Jak pracuji s tiskem v hodinách zeměpisu (How I use the press in geography lessons)
Přírodní vědy ve škole, 33, 1981-1982, No. 2, pp. 77-78.

The press is an important source of information concerning new occurances connected with geography. The teacher can use the press for supplementing and bringing up to date the subject-matter of geography, as well as making instruction more interesting. The author describes how he combines the use of press clippings with map reading, explaining basic geological terms, etc. Pupils receive assignments to bring press clippings to class or to prepare current events for discussion in class which have a bearing on geography, etc. The author also keeps a file of press clippings for future reference and use. Sepeific examples are cited for various topics and their use in various classes.

101. MAXIMOV, N.A.:
Kartochki - zadaniya po kursu fizicheskoy geografii 5. klassa (Filing cards with assignments in lessons on physical geography in the 5th class)
Geografiya v shkole, 49, 1982, No. 1, p. 48. 2 figs.

To increase the effectiveness of examinations and repetitions the author suggests using file cards size 14 x 20 cm on which he pastes a picture cut out of the textbook or from a journal, or a graph, diagram, blind map, etc. and underneath writes the tasks of one or two assignments for the pupil. Before distributing the cards, pupils should be acquainted with the rules (an atlas can be consulted, answers should be brief, etc.). The pupils write their answers on a piece of paper. The cards can be supplemented annually with new questions, etc., especially concerning the pupils' native town, region, etc.

didactics of geography - geography instruction - teaching media - clipping + press - cards + assignments - USSR.
147711.

102. MAXIMOV, N.A.:
Kartochki - zadaniya po kursu fizicheskoy geografii 5. klassa (Filing cards with assignments in lessons on physical geography in the 5th class)
Geografiya v shkole, 49, 1982, No. 3, p. 50.

The article is a continuation of an article with the same title, published in issue No. 1 of the journal. On the basis of many requests received from readers the author describes other uses for filing cards which contain press clippings and various assignments for pupils. They can be used in examinations, during repetitions, etc.

didactics of geography - geography instruction - teaching media - clippings + press - cards + assignments - USSR. 147711.

10.5 Geography textbooks and methodological handbooks

103. BARCIŃSKI, F.:
Uwagi na marginesie ostatniej książki O. Witkowskiego i J. Ilinicza: "Geografiya energetiki i metalurgii kapitalisticheskikh i raswiwajuszczichsya stran", Moskva, 1980 (Comments on the book by O. Witkowski and J. Ilinich: "The geography of the energy and metalurgical industries in the capitalist and developing countries", published in Moscow in 1980.
Geografia w szkole, 35, 1982, No. 1, pp. 6-12. 1 tab.

The author provides information on the publication of a new university textbook written by Soviet authors, which represents an important contribution to the existing literature on economic geography. The book deals with the world energy situation and the metalurgical industry; the focus of its attention is on the capitalist countries. It describes the recent history of these industries, especially as far as the output and prices of petroleum and natural gas are concerned. Discoveries of new oil fields and natural gas sources, as well as new discoveries of bituminous coal and Uranium sources, together with the construction of new dams and water power stations on the rivers of Africa, Asia and South America, which are often connected with the building of aluminum processing plants (for instance in the Cameroon, Nigeria, Brasil) have all influenced the energy situation throughout the world. The book is divided into 7 chapters which deal with the most important aspects of the energy situation and of the metal producing industries. The author also describes how the book deals with the problem of nuclear energy in the capitalist countries. In 1979, 21 capitalist countries had a total of 200 atomic power stations in operation; in 1978, 50,4 % of all the nuclear power platns in the capitalist countries were still found in the USA. Since then such countries as Spain, Sweden, Taiwan and Brasil are coming to the forefront in this area. So far, Uranium sources are inexhaustible - every kilogram of isotopes of U 235 produces 3 million times more energy than the same amount of bituminous coal. The quantity of Uranium in the capitalist countries is estimated to be equal to 3150 thousand tons, half of which are found in the USA, then in Canada and Australia. Uranium ores from Gabon and Australia are the richest. In 1976 atomic energy covered only 5.8 % of the world consumption of electric power.

didactics of geography - geography instruction - college - socio-economic geography - teaching medium - textbook + USSR - Poland. 147711.

104. HANSON, J.:

Textbooks from the Past: What Can We Learn From Them ?

Teaching Geography, 7, 1982, No. 3, pp. 124-127. 3 figs.

The author, who is a geography professor, is also a collector of old geography textbooks. The oldest book in his collection is a textbook from 1781. He offers various definitions and descriptions of the world as it was known then - which are often naive but also charming in their antiquity. His comparisons with textbooks published after 1945 show how attitudes and thinking, especially on such subjects as colonialism and colonies, has greatly changed.

didactics of geography - geography instruction - teaching medium - textbook - history + geography textbooks - Great Britain. 147711.

105. KADZIOŁKA, J.:
Odpowiedź na recenzję podręcznika "Geografia 4. Krajobrazy Polski" (A rejoinder to a review of the textbook "Geography 4. An image of the Polish landscape") Geografia w szkole, 35, 1982, No. 3, pp. 141-143.

The author comments a review written by Szymczyszyn which in his opinion devoted too much attention to the weight and outlay of the book rather than its content. The reviewer is critical of some repetitions of the civics textbook for the 3. class which are found in the textbook. But this concerns the foundations of systematic geography instruction which require repetition. The author also rejects the notion that the textbook should contain instructions for the use of various teaching media. Such information will be found in a methodological handbook to accompany the textbook.

didactics of geography - geography instruction - basic school - 4th class - teaching medium - textbook - Poland. 147711.

106. **KARASTOYANOV, S.:**

Nov uchebnik po ikonomicheska i socialna geografiya

(A new textbook for economic and social geography)

Obuchenieto po geografiya, 25, 1982, No. 2, pp. 45-46.

This textbook was published in Moscow in 1981; it was written by a team and edited by prof. Maksakovski and is intended for the students of teacher training courses. The structure and scope of the textbook reflects the present stage of development characteristised by the transition from capitalism to socialism, the struggle between two contradictory systems, the struggle to overcome colonialism and the increasing importance of scientific and technological development.

didactics of geography - geography instruction - socio-economic geography - teaching medium - textbook - USSR - Bulgaria. 147711.

107. KNAPP, B.:

The Role of Soil in Geomorphology

Teaching Geography, 7, 1982, No. 4, pp. 181-183. 6 figs.

The author briefly comments and criticizes a geography textbook which in its geomorphology section deals with problems concerning the effect of water and wind upon erosion, but overlooks the product of that erosion, i.e. the soil. The author describes the changes caused in the soil by the influence of water, the wind, lack of moisture and its horizontal and vertical composition. He also enumerates various types of soil and the causes of this variety. He then explains the theory behind soil movement and the role of the climate. Simple diagrams help make the text clear and several examples of soil movements in recent years are provided.

didactics of geography - geography instruction - teaching medium - textbook - soils - Great Britain. 147711.

108. KOVALEVSKAYA, N.K. - YEGOROVA, N.N.:
Shkolnim uchebnikam - postoyannoye vnimanie (Constant attention to school textbooks)
Geografiya v shkole, 49, 1982, No. 3, pp. 44-46.

The authors analyse the outcome of a conference on problems connected with geography textbooks which took place in January 1982 and in which 45 educators from various Union Republics participated. The discussion concerned the importance of textbooks for the forming of geographical notions, logical analysis in textbooks and methodological aspects of working with a textbook. The tables and diagrams found in textbooks and their contribution to the pupils' learning were a subject of discussion. Also the questions and assignments given in textbooks are important. The conference came to some important conclusions: more attention should be devoted to regional specific aspects, the emotional impact made upon pupils should be greater, attention should be paid in school to explaining the homework assignments found in textbooks.

didactics of geography - geography instruction - teaching media - textbooks - conference - USSR. 147711.

109. MAKSAKOVSKIY, V.P.:
K vikhodu novogo isdaniya uchebnika dlya IX. klass
(On the publication of a new edition of the textbook for the 9th class)
Geografiya v shkole, 49, 1982, No. 3, pp. 22-25.

The author informs readers of changes which have been incorporated into the latest edition of the textbook on the economic geography of foreign countries for the 9th class of general education schools. The new edition makes broad use of the documents of the 26th Congress of the Communist Party of the Soviet Union and the number of references to the works of V. I. Lenin has increased. The style of the expositions in the textbook has been simplified and a number of redundant passages have been deleted or made briefer, so as to maintain the logic of the exposition. The size of the textbook is now smaller, due to various deletions. The textbook has been improved also from a didactical point of view. After a general introduction which provides information on the changes carried out in the new edition, the author describes individual chapters and the changes in them.

didactics of geography - geography instruction - teaching media - textbook - modernization - USSR. 147711.

110. MAKSIMOV, N.A.:
Pererabotanniy uchabnik "Fizicheskaya geografiya" dlya V klasa (The re-written textbook "Physical Geography" for the 5th class)
Geografiya v shkole, 49, 1982, No. 5, pp. 24-26.

The textbook on physical geography for the 5th class had been re-written according to the new teaching syllabus and will be introduced into schools in the school year 1983-1984. The author of the article briefly mentions various changes which have been introduced and provides geography teachers with various advice on how to better implement the improved teaching syllabus for geography instruction in the 5th class.

didactics of geography - geography instruction - basic school - 5th class - physical geography - teaching media - textbook - USSR. 147711.

111. RAKOVSKIY, C.H.:
Vozrosshaya aktualnost (Of increased current interest)
Geografiya f shkole, 49, 1982, No. 6, pp. 30-32.

In the school year 1982-1983 a new, 9th edition of the textbook on the economic geography of foreign countries for the 9th class will be published. The new edition is based on the improved new teaching syllabus for the 9th class; the aim of the authors is to provide pupils with correct notions and knowledge concerning contemporary economic and social conditions in foreign countries, as well as new findings and trends in geographic science. The course on the economic geography of foreign countries provides a reflection of the changing international situation. The author cites examples of how the subject-matter taught in the 9th class geography course should be supplemented with information on the current international situation and how to demonstrate the validity of the Marxist laws of economic development.

didactics of geography - geography instruction - secondary school - 9th class - socio-economic geography - teaching medium - textbook - up-dating + instruction - USSR. 147711.

112. SZYMCZYSZYN, B.:
Podrecznik "Geografia 4. Krajobrazy Polski", Jana Kądziołki (The geography textbook by Jan Kądziołka "Geography 4. An image of the Polish landscape")
Geografia w szkole, 35, 1982, No. 3, pp. 140-141.

The author reviews the textbook cited in the title, which in harmony with international trends stresses better didactical methods, changes in content and improved textbooks. He also assesses the textbook from a hygienical point of view and comments on its lay-out and durability.

The fact that there are a number of empty pages is criticised (on 85 of the 128 pages of the textbook there are empty spaces). The captions of pictures are sometimes above and sometimes below the picture and 2 pictures have no caption at all. The author points to some other minor shortcomings, but in general his assessment of the new textbook is positive, especially because it is well written, colourful, uses various size letters and is light-weight.

didactics of geography - geography instruction - basic school - 4th class - teaching medium - textbook - Poland. 147711.

113. ŠUPKA, J.:
Sovětské učebnice geografie pro 5. - 9. ročník základní školy (A Soviet geography textbooks for the 5th to 9th classes of basic school)
Přírodní vědy ve škole, 33, 1981-1982, No. 2, pp. 78-79.

Elementary knowledge in geography is taught in Soviet schools within the framework of nature studies in the 1st to 4th classes. Geography as an independent teaching subject is in the curriculum of Soviet schools from the 5th to 9th classes. In the 5th class physical geography is taught, in the 6th class the geography of the continents, in the 7th and 8th classes the basics of the geography of the USSR (in the 7th class the physical geography of the USSR and in the 8th class the economic geography of the USSR) and in the 9th class the economic geography of foreign countries. The author provides information on the textbooks used in Soviet schools in the 5th to 9th class. All of them contain the most advanced geographical knowledge, which sometimes is quite extensive and demanding. The textbooks strive to take into consideration the age-specific characteristics of pupils and to support their independent thinking. Sources of non-verbal geographical information are very valuable.

didactics of geography - geography instruction - basic school - 5th to 9th classes - teaching media - textbooks - USSR. 147711.

114. WRIGHT, D.J.:
Varieties of Regional Geography
Teaching Geography, 7, 1982, No. 4, pp. 184-186

The article demonstrates the wide variety of subject-matter in regional geography. Various topics such as poverty, food, disease, hygiene, labour problems, population aspects, production, etc. are all found in the study of a specific country. Several textbooks, all published in Britain, are compared from this point of view. It is found that they greatly differ in their stress, approach and even some basic data. Some authors are criticised for the obsolete terminology they use (for instance colonies) or for such expressions as "typical Africa" which the author considers unscientific. The article describes the existing situation in British textbooks for regional geography, which the author considers in the majority of cases to be obsolete in view of the great changes which have occured in the world after World War II.

didactics of geography - geography instruction - teaching medium - regional geography - textbook - Great Britain. 147711.

10.5.1 Worksheets, workbooks, didactical tests, questionnairs, didactical crossword puzzles, games

115. GENCHEV, M.:

Vzpitavane kachestva na lichnosta na uchenika chrez sestemni zanimaniya po orientirane sred prirodata
(The education of pupils' personality characteristics through systematic activities in outdoor orientation)
Obuchenieto po geografiya, 25, 1982, No. 5, pp. 32-36.
Lit. 7.

In Bulgaria outdoor orientation is a new kind of sport. If a teacher wishes to commence systematic activities in this area it is best to contact the local tourist base. A sufficient number of compasses are needed to carry out competitions in the field. It is best to begin indoors, where in the form of a competition pupils learn to determine an azimuth, to read maps of various scales as well as various topographical and cartographic symbols and how to measure the length of railways or rivers on a map. During outdoor excercises, pupils learn to apply this knowledge. They use a compass and map and learn correct orientation. Various cross-country running disciplines usually form a part of the competition. These activities help to develop in pupils observation abilities, memory, thinking, imagination, will-power, aesthetical feelings, as well as moral qualities such as responsibility towards the collective, endurance, honor, etc.

didactics of geography - geography instruction - organizational form - field work - education + personality + pupil - Bulgaria. 147707.

116. KUCHER, T.V.:
Kartochki - zadaniya po kursu geografii materikov
(Filing cards with assignments on the geography of the continents)
Geografiya v shkole, 49, 1982, No. 4, pp. 52-55. 7 figs.

The author provides for teachers a series of assignments to be given to pupils in the 6th class. Each assignment should be written on an independent filing card and should include maps, diagrams, drawings, etc. as well as the assignment or questions. The cards can be used by individual pupils or by groups. The suggested series includes 18 cards and the assignments concern the following topics: maps of the continents, the relief and climate of the Earth, Africa, Australia, Antarctica. Each map or diagram on the card is followed by 3 to 4 questions or assignments which require a detailed inspection of the map or diagram. Such cards are a good aid for teachers since they do not take up too much room and they require active work from pupils, etc.

didactics of geography - geography instruction - teaching medium - didactical worksheets - basic school - 6th class - USSR. 147711.

117. KUCHER, T.V.:
Kartochki - zadaniya po kursu geografii materikov
(Filing cards with assignments on the geography of the continents)
Geografiya v shkole, 49, 1982, No. 5, pp. 53-57. 6 figs.

In this article the author provides a second series of assignments which should be written on filing cards and accompanied by various maps, diagrams, etc. The assignments are for pupils in the 6th class and concern the climate, underground water, natural regions, populations and differences between the natural conditions of various continents. These assignments are numbered 19 to 43; each card contains 3 to 4 questions or assignments which test pupils' specific knowledge. Some are more in the nature of problem assignments.

didactics of geography - geography instruction - physical geography - basic school - 6th class - teaching media - didactical sheets - USSR. 147711.

118. MIKHAYLOV, V.D.:
Krosvordy na urokâkh prirodovedeniya (Crossword puzzles in science lessons)
Geografiya v shkole, 49, 1982, No. 4, pp. 48-50. 3 figs.

Didactical games, together with other methods can enhance the effectiveness of a teaching lesson. The solution of crossword puzzles is such a game, which can have a variety of alternatives. The author cites several examples of crossword puzzles on different subjects, such as for instance the Earth as a planet of the solar system, air, water, rocks, etc. Basic terms and synonyms are defined for each puzzle, which can be directly used in a geography lesson.

didactics of geography - geography instruction - basic school - natural sciences - 4th class - teaching media - didactical games - cross word puzzle - USSR. 147711.

119. PYDE, S.:
Arbeitsblätter zum topographischen Grundwissen
(Worksheets on basic topographical terms)
Geographie im Unterricht, 7, 1982, No. 10, pp. 393-400.
5 worksheets, 3 tabs.

The author provides five worksheets which demonstrate the possibility of pupils playing an enjoyable game while learning or strengthening basic topographical terms in geography instruction. At the same time pupils learn to use an atlas. However, one of the worksheets requires preliminary excercises to acquire specific skills. The assignments given by the worksheet require the pupils finding various cities throughout the world to which airplanes from Frankfurt am Main fly, the correction of 14 errors om an outline map of the world, solving 15 geographical riddles and identifying 36 capitals of various countries among pictures of 80 cities.

didactics of geography - geography instruction - teaching media - worksheets - didactical games - FRG. 147711.

120. SCHRÖDER, H.G.:
Ein Rätsel zum Schuljahrende (A riddle at the end of the school year)
Geographie im Unterricht, 7, 1982, No. 8, p. 324.

The author suggests an amusing crossword puzzle for use at the end of the school year which provides an opportunity to repeat and sum up what pupils have learnt throughout the school year.

didactics of geography - geography instruction - teaching medium - didactical game - FRG. 147711.

10.6 Popular science journals and literature

121. GEORGIYEVA, R.:

Yedna kniga za "Novata rolya" na vodnata (A book about the "new role" of water)

Obuchenieto po geografiya, 25, 1982, No. 2, pp. 44-45.

The article gives a brief review of a new book called "Water - the most important factor in the crust of the earth" by Soviet authors Grigorieva and Rutseva. The book has been translated into Bulgarian by P.V. Petrov; it has eight chapters which in an interesting manner explain the creative role of water in the form of the underground hydrosphere and its role in various processes and phenomena which take place on our planet.

didactics of geography - geography instruction - teaching media - literature - hydrosphere - USSR - Bulgaria. 147711.

10.8.1 Measurement instruments for school meteorological stations, sextants

122. HONIG, G.:

Selbstgebaute Wetterbeobachrungsgeräte (Self-made instruments for weather observation)

Geographie im Unterricht, 7, 1982, No. 9, pp. 340-345.

12 figs. 5 photos.

We tend to rely too much on the mass communication media when observing the weather of making a weather forecasts. Especially for local areas it is much better to make independent observations. The author provides instructions for this kind of activity and how to make inexpensive instruments such as a rain guage, an instrument to measure the strength and direction of the wind, the amount of humidity in the air, various types of hygrometers, etc. The network of professional meteorological stations is not very dense and so weather forcasts can not effectively cover a whole region; for this reason the independent observation and measurement of the weather can be very fruitful. At the same time pupils come into every-day contact with weather observation terms and hence are better able to learn the subject-matter of climatology in geography instruction.

didactics of geography - geography instruction - observations - teaching media - instruments + meteorology - meteoroglogical measurements - FRG. 147711.

10.8.2 Instruments for making images for the reproduction of sound, film projectors, episcopes, epidiascopes, slide projectors, tape recorders, radios, gramophones, video-recorders, etc.

123. SCHNEIDT, R.:
Der Einsatz des Videorecorders im Erdkundenunterricht
(The use of video-recorders in geography teaching)
Geographie im Unterricht, 7, 1982, No. 7, pp. 288-291.
1 fig.

Video-recorders are now also used in geography teaching. Video-technology includes television sets for the demonstration of geographical phenomena, for making instruction more ostensive and improving the quality of instruction. The great variety of programs available is especially suited for geography, including brief news shots of what is new in the world, newsreels, foreign events. Their storage will prove to be very useful for a school. When the school has a video-recorder it is not dependent upon the broadcasting time of TV programs or the lending conditions of film services. The school should have its own cassettes which can be used for multiple purposes. Video-recorders of the newest generation make it possible to make up cross-sections of various programs or to make still pictures from telerecorded programs, the classroom need not be darkened and servicing the telerecorder is very simple. While the telerecording machine itself is quite expensive, cassettes are inexpensive, so that total costs are much less then when using film projection instruments. Videotaped programs can be used in the motivation, cognition and repetition stages of learning.

didactics of geography - geography instruction - teaching medium - videorecorder - videocassettes. FRG. 147711.

124. SCHNEIDT, R.:
Einsatz der Video-Kamera im Geographieunterricht
(The use of a video-camera in geography instruction)
Geographie im Unterricht, 7, 1982, No. 4, pp. 162-164.
1 fig.

The author discusses the use of a video-camera in geography instruction. Video-cameras which do not require the use of a power outlet (they are battery operated) are now available; they make it possible to record geographical phenomena outdoors. Thus a colour camera with a video-recorder is becoming an ideal teaching medium which can acquaint pupils with various areas of geography, especially physical geography, and can replace films. The use of video-recorders in class does away with complicated lending systems and projection instruments for films, individual images can be stopped, repeated, etc. In social geography the video-camera can be used to show water treatment stations, the disposal of waste, industrial areas, transportation networks, urban settlements, problems of foreign guest workers, etc., as well as the effect of monoculture, of the use of insecticides and artificial fertilisers, anti-erosion soil conservation or interviews can be recorded. While a video-recorder and video-camera are complicated instruments they are nevertheless very simple to use and have a great future in all types of schools.

didactics of geography - geography instruction - teaching media - video-recorder - video-camera - FRG. 147711.

10.8.3 Optical instruments, telescopes, cameras, computers

125. HALL, D. et al.:

Geography Teaching and Computers

Teaching Geography, 7, 1982, No. 3, pp. 126-139.

The use of computers in secondary school geography courses in British schools is still a novelty. The authors of the article describes a microelectronic teaching program approved in 1980. They describe the course of the program and the experiences gained by teachers with its use. Most schools expressed an interest in the program. Geography, together with mathematics, and the natural sciences has priority in this program. Training centres to train teachers for the use of the program have been set up. The authors discuss the role of the teacher in the program and the future development of computer programs for geography teaching. The experiences gained so far have been mainly positive.

didactics of geography - geography instruction - teaching media - computers - Great Britain. 147713.

10.9 Geography instruction classrooms, study rooms, storage rooms, school meteorological stations

126. SEMAKIN, H.K.:
Sozdanie geograficheskoy ploshchadki (Creating a geographical plot of land)
Geografiya v shkole, 49, 1982, No. 4, pp. 44-47.
2 figs., 1 tab., lit. 5.

The author recommends the creation of a geographical plot of land for carrying out practical geographical exercises. The small plot of land should have tables and benches for pupils, cupboards for storing various media and some raised terrain alternated with declinations, with clearly marked angles, a gauge to measure precipitation, a meteorological cabin, a weather vane, soil thermometer, solar and star clocks, etc. These facilities can be made use of not only by the geography teachers but also by teachers of other subjects, such as physics. The article describes activities which can be organized on the plot of land, such as weather observations and their records, etc. The author cites a table for weather predictions for use in the 5th class. Such a plot of land can be organized anywhere, with minimal expenses.

didactics of geography - geography instruction - basic school - organizational forms - field work - observations - meteorological station - USSR. 147711.

11.2.1 Excursions, museums

127. BURTON, T.:
Sun and Sombreros: Some Observations on Field Work in Mexico
Teaching Geography, 7, 1982, No. 4, pp. 171-175.
1 fig., 4 maps, 1 tab.

A geography excursion to Mexico was very interesting for 14-year-old students. During the excursion the author organized various excercises such as a geographical study of a city built over silver and copper mines which was sinking into the empty space underneath it. Another excercises concerned the mapping of a small town and a study of its houses, the study of the trade outlets and services available in the town of Zitacurao with 100.000 inhabitants. The author shows maps made by the students and an assessment of the excursion from the point of view of school work.

didactics of geography - geography instruction - organizational form - field excursion - teaching method - observation - excursion - map - geography + Mexico - USA. 147717.

128. HǍRLE, J. - KǑHLER, A.:
China - Exkursion (An excursion to China)
Geographische Rundschau, 34, 1982, No. 1, pp. 32-34.

The author describes a trip taken by 13 geographers to the Chinese Peoples Republic in 1981. During the several thousand kilometers long journey the group visited large cities, such as Canton, Wuchang and Peking, they travelled by airplane, railway and bus. The article provides interesting information on the life of the people in urban and rural areas, about the Chinese economy, China´s old and new culture, the situation as far as food is concerned and environmental problems. China is now undergoing a revival of culture and is overcoming the negative aftermath of the Cultural Revolution and the personality cult.

didactics of geography- geography instruction - organizational form - excursion - Chines Peoples Republic - environmental concervation : FRG. 147759.

129. HOLAS, V. - LANGE, L.:
Zeměpisné vycházky v 5. ročníku základní školy
(Geographical excursions in the 5th class of basic schools)
Přírodní vědy ve škole, 33, 1981-1982, No. lo, pp. 394-395.

Geographical excursions are an important part of geography instruction. They are usually organized outdoors and include direct observations. Besides the use of a map, stress is placed on the development of abilities to observe the landscape. The date of the excursion is set according to a thematic plan. The teacher should devote adequate attention to its preparation, especially as far as the choice of a locality and region is concerned and also as far as preparations on the part of the pupils are concerned. In the 5th class 2 excursions are planned, the first deals with the use of a map of the vicinity of the school, the determination of cardinal points, determining distances on a map, making map sketches. The second excursion concerns the topic The erosion of the Earth´s surface, for which the authors provide an excursion protocol.

didactics of geography - geography instruction - basic school - 5th class - organizational form - excursion - physical geography - field work - Czechoslovakia. 147717.

130. HUNT, M.J.:
How to Approach your Geography Project
Teaching Geography, 7, 1982, No. 4, pp. 175-179.
1 fig.

With the aid of drawings and humerous captions the author shows how to prepare a geography project; he discusses literature, maps, transportation, measurement instruments, how to determine the route of the trip, how to select an object for observations, how to find information sources, how to interview people, how to distinguish primary information and secondary information and how to teach pupils to observe nature from the point of view of geography and not merely as tourists. The article is an excellent guide for teachers who are preparing an excursion for 14 to 15 year olds.

didactics of geography - geography instruction - organizational form - excursion - Great Britain. 147713.

131. KANDERT, J.:
Publikační činnost Náprstkova muzea (Publication activities at the Náprstek Museum)
Lidí a země, 31, 1982, No. 12, p. 552.

The staff of the museum publishes its research findings in a collection of papers called Annals of the Náprstek Museum, which have been regularly published since 1962. 10 volumes have so far been published.

didactics of geography - geography instruction - teaching medium - literature - museum - Czechoslovakia.
147711.

132. KŘÍŽ, H. - KŘÍŽOVÁ,I.:
Vycházky ve vyučování zeměpisu na základních školách
(Excursions in geography instruction in basic schools)
Přírodní vědy ve škole, 33, 1981-1982, No. 4, pp.156-159.
5 photos

The article provides aid to teachers when they are studying the new teaching syllabus. Geography is of course taught primarily in the classroom, but outdoor instruction during excursions combined with the observations of natural processes and the influence of man on the landscape, are also important. In basic schools the syllabus assumes 7 geographical excursions of 3 hours each, i.e. a total of 21 teaching lessons in each class. When preparing the excursion first a suitable route should be chosen. The author recommends an excursion for the observation of hydrological phenomena. Before the excursion itself the teacher must acquire the relevant maps, as well as literature on the topics to be studied. An excursion in the 6th class is described in detail; it concerns the incidence and circulation of water in the landscape, precipitation, the snow cover during the winter months, the nearest meteorological observation station, the river network, lakes, ponds or reservoirs, the problem of water pollution of underground waters, springs, etc.

didactics of geography - geography instruction - basic school - organizational form - excursion - Czechoslovakia. 147717.

133. KŘÍŽ, H. - KŘÍŽOVÁ, I.:
Vycházky ve vyučování zeměpisu a na základní škole - II
(Excursions in geography instruction in basic school - II)
Přírodní vědy ve škole, 33, 1981-1982, No. 5, pp.192-194.

The continuation of an article to help teachers in the organization of geography excursions. While the excursion in the 6th class was concerned mostly with the pollution of underground waters, the excursion organized in the 7th class concerns the pollution of surface waters. Water pollution is among the most important and most negative of human interventions into nature. Surface waters are polluted by waste from human settlements, by industry, agriculture and more specifically by the use of artificial fertilizers, pestacides, etc. In the 8th class the excursion concerns changes caused by human intervention into the circulation of water, the regulation of rivers, the drainage of agricultural land and water treatment plants. A suitable place for an excursion is the water source from which the school and its vicinity get their water. Pupils can measure the speed of surface flows, the depth of the water, its temperature, how the quality of a water source is measured, etc. An index of hydrological terms is added.

didactics of geography - geography instruction - basic school - 7th class - 8th class - organizational form - excursion - hydrology - Czechoslovakia. 147717.

134. RAW, M. et al.:
Introducing Settlement Studied Through Fieldwork
Teaching Geography, 7, 1982, No. 3, pp. 107-109.
6 figs.

An excursion to a city or town when studying settlements is always an attractive supplement to a human geography course. The author describes an excursion with 12 and 13 year old children to a town with 14 thousand inhabitants. The students received assignments for data collection which concerned types of houses, communications, shops, approaches to the town, the railway, agriculture and industry in the vicinity, etc. The author describes how the students collected various data and how the excursion was organized, including various preparations. Also the drawing of map sketches according to topographical rules, making diagrams and writing a report on the project are all described. The season when the excursion is organized is very important.

didactics of geography - geography instruction - basic school - organizational form - excursion - settlement geography. 147717.

135. Krkonošské muzeum (The Krkonoše Mountains Museum)
Lidé a země, 31, 1982, No. 12, p. 570.

A Museum of the Krkonoše Mountains has been opened in the town of Vrchlabí. Its expositions show samples of folk art from the vicinity, as well as pottery, china, glass and tin objects, wooden toys and folk paintings on glass, cuckoo clocks, spinning wheels, Christmas creche figures, folk furniture and folk costumes. An interesting exhibit is a three-dimensional map of the Krkonoše Mountains made in 1736. Vrchlabí has a beautiful park in the former Palace Gardens in the English style and a Renaissance palace built in the years 1546-1614, which now houses the administration of the Krkonoše Mountains National Park.

didactics of geography - geography instruction - excursion - museum - Krkonoše Mountains - Czechoslovakia.
147713.

136. SLUTSKAYA, R.D.:
Vesennaya ekskursiya v 4. klasse (A spring time excursion in the 4th class)
Geografiya v shkole, 49, 1982, No. 2, pp. 46-51.

The author provides a detailed methodological instruction for the organization of a spring excursion with pupils, which has the purpose of learning about plants and animals in the region. The author defines the teaching and educational objectives of the excursion, the media used, as well as interdisciplinary relations which can be stressed. She also stresses that the excursion must be properly planned well in advance. Its purpose is to arouse in children a positive attitude towards nature and to teach them to carefully observe nature and take notes on what they have seen. Education towards environmental conservation can be implemented through organizing pupils' work teams to clean a section of the forest, etc.

didactics of geography - geography instruction - basic school - 4th class - organizational form - excursion - interdisciplinary relations - USSR.
147713.

137. SNASOV, D.:
Ekskursite i pokhodite do socialisticheski obyekti - efektivno sredstvo za patriotichnoto vzpitanie na uchenitsite (Excursions and visits to socialist enterprises - an effective method of patriotic education of pupils)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 12-16.

To increase the pupils' interests in building their socialist motherland and strengthening their pride in the successes achieved by the economy, culture, industry and agriculture, some teachers have organized various excursions to model enterprises. The planning of such an excursion requires detailed preparation which can be divided into three parts: preparations for the excursion, carrying out the excursion and carrying out its assessment, together with the writing of a report. The preparations which the teacher undertakes include the preparation of an excursion plan, clarification of the excursion's objectives and obtaining permission to enter the plant or organization, the transportation of pupils, acquiring financial means, gathering literary documentation, etc. In the group of pupils it is necessary to form a creative and friendly atmosphere, provide instructions for the taking of notes, prepare rest periods, organize discussions with the staff of the enterprise, etc. The assessment of the excursion requires a written report which should provide a survey of the excursion, documentation for the school archives and for the other classes in the school, by which they can become acquainted with the findings of the excursion through the school radio, bulletin boards, school newspaper, etc. The author also describes several specific excursions to outstanding

Bulgarian enterprises and cites specific data about their work, which are a source of knowledge for the pupils, related to the topic "The function and development of the enterprise under socialism."

didactics of geography - geography instruction - organizational form - excursion - patriotic education - Bulgaria. 147717.

138. ŠTULC, M.:
Komplexní exkurze do chráněné krajinné oblasti Křivoklátsko. (A comprehensive excursion to the Křivoklátsko landscape reservation)
Přírodní vědy ve škole, 33, 1981-1982, No. 6, pp.236-238.
Lit. 15

The author describes the opportunities which exist in the most recently opened landscape reservation of Křivoklátsko. He describes various trails in the reservation which schools can use for various types of excursions, including a list of various stops and their description. In conclusion he provides various technical instructions. This area includes a number of natural biocenoeses, which are still intact. Pupils can study the creation and development of the central Bohemian basin, its original vegetation, they can gain practical knowledge in palaeontology, geology, physical geography, botany, zoology and ecology. Such an excursion can also be used for education for environmental control and nature conservation.

didactics of geography - geography instruction - general education school - organizational form - excursion - nature conservation education - environmental control education - Czechoslovakia. 147717.

11.2.2 Geographical seminars

139. BELYAEVA, L.V.:
Lektsionno-seminarskaya forma obucheniya pri izuchenii temi "Geografiya nasileniya mira" v IX klase
(A lecture and semirar form of instruction in teaching the topic "The geography of the world population" in the 9th class)
Geografiya v shkole, 49, 1982, No. 5, pp. 29-33.
3 tabs., 4 digrams,

The author divided the subject-matter of this topic into two lectures accompanied by a third lesson devoted to a seminar , where the pupils prepare reports on independent assignments, which require the use of various teaching media. The program of each lesson is written on the black board. During the lecture tne author uses various tables, diagrams and graphs, which are used to demonstrate the social stratification of the population in various parts of the world, population increments and changes which have taken place, as well as changes which have occured in the environment. The lesson devoted to a seminar requires the preliminary preparations of pupils; assignments concern such topics as problems of urban development, trends in population migration in Europe, specific aspects of population distribution in the developed capitalist countries and in developing countries, etc. The papers presented to the seminar by pupils, under the supervision of the teacher, contain material gained by the pupil in independent work on the assignment, as well as the subject-matter found in the teaching syllabus. In the concluding part of the lesson pupils formulate questions on the subject-matter of the seminar, as well as their answers.

The questions for instance include the following: what type of chenges are occuring in the employment and occupational structure of the world population ? Which indicators best demonstrate the quality and speed of urban development ? Which factors lead to the stabilization of populations in various areas of the world ?

didactics of geography - geography instruction - secondary school _ 9th class - organizational form - seminar + geography - USSR. 147714.

140. VOYLOSHNIKOVA, N.A.:
Uroki typa seminara v XI klasse (Seminar-type lessons in the 9th class)
Geografiya v shkole, 49, 1982, No. 3, pp. 39-42.

In seeking new forms of instruction, seminars are increasingly used. Pupils are able to make use of the outcome of their extra-curricula activities, they learn to formulate their ideas, discuss current problems, gain the habit of systematically using specialized literature and they also learn to assess and analyze their own presentations, as well as those of their classmates. The teacher, however, should prepare his pupils for work in a seminar and create an atmosphere for its successful work. The author recommends giving pupils assignments at the beginning of the school year; each pupil will follow events in a specific socialist country. When the pupil is called upon to present his paper, the others are able to better assess his performance. The author also provides other recommendations for the work of such seminars.

didactics of geography - geography instruction - secondary school - 9th class - organizational form - seminar - paper + pupil - USSR. 147713.

11.2.3 Geography discussions

141. DRAGIEVA, H.:
Geografska vecher na tema "Moyat roden kray - dreven i svremenen" (A geographical evening on the topic "My native region - yesterday and today")
Obuchenieto po geografiya, 25, 1982, No. 4, p. 33-37.

The Young Pioneer members from the Nikola Lankon school in the town of Kazalink organized an evening program at the occasion of the 1300 anniversary of the creation of a Bulgarian state on the subject "My native region - yesterday and today". The purpose of the program was to extend young people's knowledge concerning their native region from a geographical, historical, biological and literary point of view with the purpose of strengthening their patriotic and aesthetical education. The pupils participated in organizing the program, preparing the hall where the evening took place and collected information from enterprises in the vicinity and from outstanding personalities concerning the more distant history of the region. Also bulletin boards, suitable maps and a cultural program were prepared. Some pupils prepared papers concerning interesting aspects of the main topic which were presented in the program. An interview with comrade Naydenov, secretary of the local government in Kazalnik was taped and played to the auditorium. A documentary film called "Bread and Roses" about the town of Kazalink was also shown.

didactics of geography - geography instruction - basic school - 3rd to 7th class - organizational form - program + geography - Bulgaria. 147717.

11.2.4 Geography Olympiads and other competitions

142. KONRÁDOVÁ, V.:
Zemepisná olympiáda v Západoslovenském kraji
(The Geography Olympiad in the West Slovakian Region)
Přírodní vědy ve škole, 33, 1981-1982, No. 4, p. 159.

On April 23rd and 24th 1981 the 9th annual regional round of the Geography Olympiad was held in the post-graduate centre of the Regional Pedagogical Institute in Budmerice. The Olympiad was organized by the Ministry of Education of the Slovak Socialist Republic. Students competed for two days and the competition had 4 categories. The Slovak round was held on May 7th to 11th at Stará Lesná in the High Tatra Mountains. The conclusion was made that the quality of the Olympiads is steadily improving.

didactics of geography - geography instruction - organizational form - Olympiad + geography - Czechoslovakia. 147717.

143. LICIŃSKA, D.:
VII olimpiada geograficzna (The 7th geography Olympiad)
Geografia w szkole, 35, 1982, No. 1, pp. 37-38.

In the school year 1980-1981 the 7th Geography Olympiad was held in which 1963 pupils participated. 981 pupils passed the written part of the competition (94 % of those who passed were pupils from general education secondary schools). Only 42 % of the general education secondary schools (lyceums) in Poland participated. The competition had three rounds and only 54 pupils got to the national round. 16 of these entered the finals. The author describes the subject-matter of the competition and the course of various rounds.

didactics of geography - geography instruction - secondary school - organizational form - Olympiad + geography - Poland. 147717.

144. TRGO, I.:
Zamyślenie nad zemepisnou olympiadou (Comments on the Geography Olympiad)
Přírodní vědy ve škole, 33, 1981-1982, No. 9, pp. 359-360.

10 years ago the competition "Learn about your motherland and about the other socialist countries" was announced. Three years ago this competition was raised to the status of a Geography Olympiad. Since 1982 The Ministry of Education of the Slovak Socialist Republic has been the organizer of the competition, together with Regional Pedagogical Institutes and school administrations of local governments. The competition was held in 4 categories. The author cites the outcome of the competition in 1982.

didactics of geography - geography instruction - organizational form - Olympiad + geography - Czechoslovakia. 147717.

145. WITEK, S.:
Konkursy geograficzne jako sprawdzian wiadomości w klasie IV (Geographical competitions as a means for achieving better knowledge in the 4th class)
Geografia w szkole, 35, 1982, No. 1, pp. 34-37.
1 fig.

The conscientious and active participation of pupils in the teaching and educational process and in learning is one of the important principles of geography instruction. Suitable motivation for the study of a specific field of knowledge is very important;

this includes pupils'interests, their curiosity and strivings to gain new knowledge. Pupils'interests are either more emotional or more intellect orientated; this provides opportunities to use modern teaching media to the greatest effect. During lessons, previously gained knowledge should be integrated into the new subject-matter. Didactical games are an important component of geography instruction. The author demonstrates the use of games in determining pupils' knowledge in connection with the competition "Let us learn about our native region".

didactics of geography - geography instruction - basic school - 4th class - organizational form - competition - Poland. 147717.

11.3 Independent homework

146. BRUNCK, H. - MEINECKE, R.:
Kontrolle und Bewertung von Hausaufgaben im Geographieunterricht (The inspection and assessment of homework in geography instruction)
Zeitschrift für Erdkundeunterricht,

The authors clarify in detail the opportunities provided by assessing homework assignments in geography instruction. They describe the requirements which should be taken into consideration when assignments are given and various forms of checking up on how the homework was done. Specific examples of such assessments are given for various classes. How the pupils carry out their homework assignments also provides an indication of how they have understood the subject-matter taught in class, how they are able to express themselves and what skills they have acquired. Homework assignments should be factual and correctly formulated from a didactical point of view; they should also be organically linked to classwork.

didactics of geography - geography instruction - organizational form - homework - GDR. 147713.

147. HOŠKOVÁ, J.:
Středoškolské odborné činnosti na gymnáziu
(Secondary school specialized activities in general education secondary schools)
Přírodní vědy ve škole, 33, 1981-1982, No. 3, pp.118-119.

The author provides information on so-called SOČ, an acronym used to designate secondary school specialized activities and what has been achieved in general education secondary schools. She herself has been supervising this kind of activity for 6 years. The activities are organized in various sections, for the social sciences (i.e. geography, history and civics), the natural sciences (including biology, chemistry, physics and mathematics) and languages (Czech, Russian, foreign languages). Students independently prepare papers, beginning with the second class. They are given assignments according to their own interests and according to the needs of society and their outlooks for further study at an institution of higher learning. Usually students take 1 or 2 years to prepare their assignment. They often have educators from higher learning institutions or from scientific institutes as consultants. The author describes in detail the type of assignments given for this purpose and examples of successful projects done by secondary school students.

didactics of geography - geography instruction - general education secondary school - organizational form - secondary school + specialized activity - Czechoslovakia. 147717.

148. KORINSKAYA, V.A.:
Trebovaniya k sisteme zadaniy dlya samostoyatelnikh rabot po kursam fizicheskoy geografii (Requirements for a system of assignments for independent work in physical geography)
Geografiya v shkole. 49, 1982, No. 2, pp. 38-41.

Modern instruction makes extended use of pupils´ independent work, which contributes to their activation and increases the effectiveness of pupils´work. They are also more active in the creation of their own worldview. The author divided independent assignments into several groups according to how difficult they are and illustrates each group with a number of examples. The system of independent assignments should fulfill the following requirements: 1) it schould concern the most important notions and relations, causes and effects of the subject, 2) it should include all components of knowledge and procedures used in learning, 3) it should teach the pupils to work with various source material, 4) it should develop cognitive abilities, 5) it should provoke the pupil´s interest, 6) it should have various stages of difficulty, according to the pupil´s abilities and maturity.

didactics of geography - geography instruction - physical geography - organizational form - independent work + pupil : USSR. 147713.

149. SPIETH, O.:
Langfristig geplante Aufgabenstellung für den Schüller im Geographieunterricht der Klasse 11. (The long-term planning of assignments for pupils in geography instruction in the 11th class)
Zeitschrift für den Erdkundeunterricht, 34, 1982, No.10, pp. 386-395.
1 tab.

The author here discusses the possibility for the long-term planning of assignments in geography instruction and provides specific suggestions in this area. The purpose of the article is to achieve more effective organizational work on the part of the teacher in this area. The examples which are cited serve to improve the coordination of the pupils'activities. Planning is carried out according to various subject-matter and concerns homework, learning various notions and specific tasks. In conclusion the author sums up the advantages of this type of long-term planning in school work.

didactics of geography - geography instruction - secondary school - 11th class - independent work + pupil - homework - GDR. 147713.

11.4 Field work, practical activities

150. BARINOVA, I.I. - DUSHINA, I.V.:
O sisteme prakticheskikh rabot v kursakh fizicheskoy geografii usovershenstvovannoy programmi (Concerning a system of practical excercises in physical geography lessons according to the improved version of the teaching syllabus)
Geografiya v shkole, 49, 1982, No. 1, pp. 29-34.
3 tabs.

Practical excercises are an important component of geography instruction. They teach pupils to work independently and make the knowledge learnt more specific. Work with various types of maps, drawings and globes becomes gradually more difficult and comprehensive from the 5th class onward. The authors warn against frequently made methodological mistakes. Practical excercises should not be undertaken only after the completion of a topic, but also in the introductory stage. Pupils should be precisely informed on the objectives of practical excercises, which should never be given as homework. Practical excercises have been integrated into a uniform system which is taught according to specific principles: 1) providing maximum variety of subject-matter, 2) linking together the work done in various school years and in various sections of the teaching syllabus, 3) maximum utilization of geographical instruction methods, such as observations in nature, cartographical and statistical methods, 4) the precise formulation of objectives, as well as instructions on how to proceed and recommended source material.

didactics of geography - geography instruction - organizational form - practical exercises - physical geography - USSR. 147713.

151. BUZEK, L. - HAVRLANT, M.:
Krajina a životní prostředí. Praktická cvičení v terénu
(The landscape and the environment: Practical excercises in the field)
Přírodní vědy ve škole, 33, 1981-1982, No. 7, pp.269-272.
9 figs.

The authors discuss the teaching of the final section of the geography course in the 7th class of basic school, which is devoted to the relations between the natural and socio-economic aspects of the landscape and to the objective of conserving, as well as developing the landscape and education towards environmental control. The authors describe various practical excercises which are done in the field, i.e. during excursions. Special stress is placed on the local landscape, which always provides opportunities for observing the impact of human intervention into the landscape and the changes caused by economic activities. The authors recommend the making of documentation on the basis of map sketches. Specifically various types of cultural landscapes are studied, the influence of industry upon the landscape (3 examples are cited), transportation media in the landscape, accelerated erosion on the basis of human intervention, measuring a thermal inversion, an assessment of the exposure of slopes, the influence of temperature and the length of sunshine and measurement of dust fall.

didactics of geography - geography instruction - basic school - 7th class - organizational form - excursion - field work - practical excercise - physical geography - socio-economic geography - Czechoslovakia. 147717.

152. DANILOV, M.:
Urok na prakticheska rabota na tema "Topografska karta"
(A lesson with practical excercises on the subject
"A topographical map")
Obuchenieto po geografiya, 25, 1982, No. 5, pp. 2731,
2 tabs., 1 graph.

The author recommends that the lesson begin with a discussion concerning the essential properties of a topographical map. Pupils compare it with other types of maps. To motivate pupils the teacher can read an interesting excerpt from supplementary literature on the use of topographical maps in the history of war. The article cites the example of the Chinese-Japanese war. The objectives of the lesson itself are the following: 1) to draw a profile on the basis of a given line with the use of the school atlas for the 7th class, 2) use the drawn profile and topographical map to characterize the area north-west of the given line, 3) attempt to forecast economic development of this area. More detailed instructions should be written on the blackboard. Each pupil should have in front of him a sheet of paper with the required data. The author cites several examples of pupils´ responses to this assignment.

didactics of geography - geography instruction - basic school - 7th class - organizational form - practical excercise - topografical map. 147713.

153. DRMOTOVÁ, D.:
Výuka zeměpisu v terénu jako moderní forma aktivace žáků (Teaching geography in the field as a modern form of activating pupils)
Přírodní vědy ve škole, 33, 1981-1982. No. 7, pp. 277-280.
3 figs.

The author describes her pedagogical reading on the subject of "Teaching geography in the field as a modern form of activating pupils", which she presented at the J.A. Comenius Days, held in Uherský Brod in 1981. In the reading she describes her experiences with geography teaching in the period 1973-1979. During a one-day excursion, she set for herself the objective of activating pupils. She strives to use such teaching forms which would to a maximum extent develop pupils´ independence. She then describes an excursion she organized to the Příbram district. Before the excursion she summed up for groups of pupils the location, area, surface, waters, geological formations, soil, agriculture, industry and settlements of the district and gave each pupil a sheet with independent assignments. In conclusion she also had pupils draw the route of the excursion into maps prepared for this purpose. 24 pupils participated in the excursion and at 10 different sites they carried out a total of 20 different assignments concerning geography, as well as other school subjects. After th excursion its outcome was assessed.

didactics of geography - geography instruction -
basic school-pedagogical readings - organizational form
- field work - excursion - Czechoslovakia - 147717.

154. DUSHINA, J.V.:
Prakticheskie raboty v VI klas (Practical work in the 6th class)
Geografiya v shkole, 49, 1982, No. 4, pp. 36-39.

In the supplementary geography course taught in the 6th class, 32 lessons are devoted to practical excercises and 2 spring excursions are organized. The outcome of what pupils have learnt is assessed and this provides an opportunity to assess this type of instruction. The practical excercises concern the following topics: maps of the continents, specific aspects of the relief and climate of the Earth as a whole. Africa, Australia, Antarctica, South America, North America, Eurasia, essential geographic laws. The essence of these excercises is in the comparative method which makes it possible to learn typical characteristics for various regions, to use a map, make sketches of climate zones, sketches of the landscape, etc.

didactics of geography - geography instruction - basic school - 6th class - organizational form - practical excercise - excursion - USSR. 147717.

155. DYLIKOWA, A.:
Obserwacje terenowe z zakresu geologii i geomorfologii (Observations in the field concerning geology and geo-morphology)
Geografia w szkole, 35, 1982, No. 4, pp. 170-176. Lit.9.

Field work is very important for achieving permanency and precision in geographical knowledge. During observations pupils can concentrate on the existing state and on the dynamics of development in the modulation of the earth's surface. In some cases also the influence of other factors can be observed, for instance the accumulation of sediments, fluvial terraces, land-fill work, etc., as well as the impact of glaciers and the subsequent effect of glacial waters, the creation of soil, clay, sand and gravel, etc. The author points to the possibility of carrying out such observations in various parts of Poland. Among the objects of observations are also rocks, their layers and structure, geological cataclysms, the inclination of various layers, relations between geological structure and shape, denudation, erosion and sedimentation, etc. Poland is especially well suited for various observations connected with the presence of glaciers and their effect on the structure and shape of the landscape.

didactics of geography - geography instruction - geology - geo-morphology, organization [illegible] m - excursion - field work - teaching methods - observations - Poland. 147717.

156. DYLIKOWA, A.:
Obserwacje terenowe z zakresu geologii i geomorfologii - cześć II (Observations in the field concerning geology and geomorphology - Part II)
Geografia w szkole, 35, 1982, No. 5, pp. 226-237.
1 tab., 6 figs.

The author acquaints readers with the preparation and carrying out of geological and geomorphological field observations of various geological and structural shapes of the earth's surface. An area is chosen and its natural history is studied. Preparatory work includes reading the relevant literature and the study of cartographic material. Also a geological map of the area should be studied. Before the excursion pupils should become acquainted with how to measure and record findings, how situational sketches are made, etc. The author describes in detail how these studies were undertaken in Antonowice, 17 kilometers south of Szczercowe.

didactics of geography - geography instruction - geomorphology - geology - teaching method - observations - organizational form - field work - excursion - Poland. 147717.

157. GERASIMOVA, T.P.
Prakticheskiye raboti v V klase (Practical work in the 5th class)
Geografia v shkole, 49, 1982, No. 5, pp. 26-29.

Practical assignments in the early stages of the course in physical geography help to extend pupils' general knowledge in this field, to learn the relevant notions, as well as how to use maps, graphs, diagrams. Notes on practical activities should be kept separate from other notes and should be regularly seen by the teacher and marked. In this context the author also cites various topics and the methods which can be used. According to the teaching syllabus, 7 lessons should be devoted to practical activities and 2 excursions devoted to observations of the landscape as a complex phenomenon.

didactics of geography - geography instruction - basic school - 5th class - organizational form - practical excercise - excursions - USSR. 147717.

158. KOVALEVSKAYA, M.K.:
O prakticheskikh rabotakh po kursu ekonomicheskoy geografii SSSR (On practical work in the course on the economic geography of the USSR)
Geografiya v shkole, 49, 1982, No. 3, pp. 36-38.

The modernization of the teaching syllabus requires practical work; the article determines general criteria for this work, as well as its extent and subject-matter. Practical excercises can be introduced at various times throughout the school year,as well as other pupils´ practical activities. In the article the author submits a number of specific suggestions and various recommendations.

didactics of geography - geography instruction - economic geography - organizational form - practical excercise - USSR. 147713.

159. KOSEVA, M.:
Svetskiyat opit - iztochnik na povishavane na pedagogicheskoto maystrovstvo (Soviet experiences - a source of improving pedagogical skills)
Obuchenieto po geografia, 25, 1982, No. 5, pp. 37-40.

In 1981 geography teachers from general education secondary schools where the teaching language is Russian had the opportunity of attending a course held for them by the Moscow Institute for the purpose of improving their qualification. The course included lectures in pedagogics, psychology, and the didactics of geography. Also problems of an educators´ creativity were discussed and his or her ability to lead pupils towards the correct utilization of knowledge and skills in new situations. The tried method of achieving this is to communicate conditions in the form of a question and suggest a solution on the basis of suitable operations in the form of an answer. The author illustrates this method on the basis of a lecture on the socialist countries. Also other topics to which lectures and /or seminars were devoted are mentioned.

didactics of geography - geography instruction - further education of teachers - pedagogics - psychology - lectures - practical excercises + USSR - Bulgaria. 147701.

160. MERKEL, H.:
Praktische Vermessungsarbeit als Grundlage für eine Kartenstellung. Projektunterricht mit Feldarbeit in einer 6. Klasse eines mathematischen-naturwissenschaftlichen Gymnasiums (Practical measurements as the foundation for making a map. Project teaching with field work in the 6th class of a mathematical and natural science general education secondary school)
Geographie im Unterricht, 7, 1982, No. 2, pp. 47-57.
Lit. 11, 5 worksheets, 4 figs.

The author provides the outlines of student projects in geography as they have been tested in geography courses at general education secondary schools in the Baden-Würtenberg region. The aim of this type of teaching is for a group of students to independently make a map on the basis of their own measurements taken in the course of field work. First practical excercises with measurements were undertaken, including the measurements of heights, making models of the landscape out of plastics on a scale relevant for the map, etc. Contact with reality led to the creation of sketches, models and then by further abstraction, the making of maps. The pupils were given the following assignments: specify factual content of a picture, orientation in the landscape, determining cardinal points, making sketches, using a map, making drawings for a map, using symbols in a map, using a map scale, the use of a standard measurement in a known landscape, the use of analogies, making a bird's eye veiw sketch, a cross-section, making long distance measurements, etc. This project assumes the use of 9 teaching lessons.

didactics of geography - geography instruction - secondary school - organizational form - field work - cartography - project method - FRG. 147713.

161. TOBORKA, G.:

Terenata prakticheska rabota pri izuchavane na razdela relief na zemnata susha v sedmi klas (Practical field work in learning about differences in the relief of land in the 7th class)

Obuchenieto po geografiya 25, 1982, No. 2, pp. 26-30.

The teaching syllabus for the 7th class indicates 12 lessons for practical work and 3 lessons for excursions. The author recommends devoting three lessons to the problem of differences in the relief of the land. His pupils undertook this type of study in the Sofia basin, near the town of Bozhurishche. The teacher should first become acquainted with the specific aspects of the terrain and of course prepare all the required aids for the project, such as compasses, geological hammers, glass vessels, etc. Pupils should first recall all their theoretical knowledge connected with this project. The article describes in detail the activities of individual groups of pupils during field work.

didactics of geography - geography instruction - basic school - 7th class - organizational form - field work - excursion- geomorphology - group instruction - Bulgaria. 147717.

162. VOLODINA, G.V.:
Sistema formirovaniya znaniy ob obshchikh geograficheskikh zakonomernostyakh v kurse geografii materikov
(The system of forming knowledge of general geographical laws in the course of teaching the geography of the continents)
Geografiya v shkole, 49, 1982, No. 1, pp. 22-28.
3 figs.

A system of knowledge concerning the Earth´s crust and general geographical laws (the unity of the Earth´s crust, the circulation of matter, the rhytmic nature of various processes, geographical zonality) form the main subject-matter of physical geography and are taught from the 5th class onward. The geography of the continents in the 6th class represents a component of this course. The author stresses the need for a deductive approach which makes use of pupils knowledge; on the basis of already learnt examples, logically consistent laws are learnt. The author deals in detail with several lessons from the beginning of the course. The first lesson deals with natural complexes and then with the notion of a "natural and territorial complex". The notions of a natural law and necessity should be stressed. In subsequent lessons, when the geography of the continents is learnt, these laws and necessities are made more specific, especially in the course of discussions and also in pupils´ independent work.

didactics of geography - geography instruction - physical geography - basic school - 6th class - independent work + pupil - USSR. 147713.

11.5 Science trails

163. PULINOWA, M.Z. - JAJEŚNICA, J.:
Ściezka skalnej rezby w górach stołowych (A model science trail in the Stołowe Mountains)
Geografia w szkole, 35, 1982, No. 4, pp. 176-183.
1 tab., 3 figs.

The staff of the Geographical Institute at the Silezian University in Sosnowiec has created a science trail through the Stołowe Mountains, which provides opportunities for studying geomorphology in the course of field work. The authors describe the trail in detail, as well as the work of pupils there. They specifically enumerate the various aids and materials pupils should take with them. During the excursion to the trail, pupils have an opportunity to study the constant development of the terrain, which is in permanent dynamic movement. They learn to approach geographical phenomena genetically, as variables. The interesting aspects of the Stołowe (or Table) Mountains are the outcome of the geological development of the terrain: the lowest layer is composed of chalk and sandstone with marl in the middle and hard sandstone as the top layer. While the sandstone is highly resistant and does not erode, marl and chalk are soft, with very little resistance, so that a highly contrasting modulation of the landscape occurs. The trail contains 14 sites where basic geomorphological observations and measurements can be carried out. Also the history of the area from a geological point of view (270 million years) is described.

didactics of geography - geography instruction -

general education school - organizational form - geographical trail - field work - instruction method - observations - geomorphology - Poland. 147717.

11.6.3 Instruction in groups

164. MUTOV, I.:
Grupovata rabota na uchenite pri obuchenieto po geografiya v shesti klas (Group work of pupils in geography instruction in the 6th class)
Obuchenieto po geografiya, 25, 1982, No. 4, pp. 20-23.
1 tab.

Group work in geography lessons develops the organizational abilities and independence of pupils. Practical experience indicates that encouraging cooperative forms of work lead to successful instruction and education. The author discusses the number of pupils which should form a group and stresses that groups should be composed of pupils with more or less equal knowledge and abilities; such groups are especially valuable during excursions. The number of pupils should not exceed 5. The author then describes practical work done by groups of pupils in the 6th class. After a brief introductory lesson the class was divided into groups and each group received three assignments. The pupils can mutually consult each other and also seek the advice of the teacher.

didactics of geography - geography instruction - basic school - 6th class - cooperational forms - group instruction - organizational form - practical excercises - Bulgaria. 147713.

12. Planning geography instruction

165. LISENKOVA, G.J.:
Primenoe tematicheskoe planirovanie urokov po kursu "Ekonomicheskaya geografiya zarubezhnikh stran"
(Model thematic planning of lessons in the course on the economic geography of foreign countries)
Geografiya v shkole, 49, 1982, No. 3, pp. 30-35.

Planning is carried out on the basis of the most recent edition of the textbook, which is reviewed in detail in the same issue of the journal. The plan contains the following: 1) number of lessons, topic, content of each lesson, 2) educational and teaching objectives, 3) teaching media used, 4) basic notions and skills, interdisciplinary relations, 5) new terms and notions 6) practical excercises 7) questions and answers for marking pupils. In conclusion the author provides a detailed plan for two topics.

didactics of geography - geography instruction - planning - socio-economic geography - regional geography - capitalist countries - USSR. 147707.

12.1 Drawing up plans for geography instruction and plans for individual topics

166. KASTRONE, K.A.:
Izuchenie geografii Latvinskoy SSR v kurse ekonomicheskoy geografii SSSR (Teaching the geography of the Latvian SSR in the course on the geography of the USSR) Geografia v shkole, 49, 1982, No. 6, pp. 32-35.
1 tab.

The economic geography of the individual Union republics represents an essential part of the course on the geography of the USSR. This subject-matter is found in two topics: A survey of the whole USSR and A survey of Union republics and large geographical regions in the USSR. The author provides a detailed plan for the former, i.e. the subject-matter of the economy of the Latvian SSR within the framework of a "Survey of the USSR." The final part of the plan includes a list of teaching media and methods to be used.

didactics of geography - geography instruction - economic geography - Latvian SSR - regional geography - thematic plan - USSR. 147707.

167. LISENKOVA, G.J.:
Primernoe tematicheskoye planirovanie kurse ekonomicheskoy geografii zarubezhnikh stran - IX klas.
(Model thematic planning of lessons in the course on the economic geography of foreign countries - 9th class)
Geografiya v shkole, 49, 1982, No. 4, pp. 28-36.

The author provided a model thematic plan for the topic "The socialist countries," which is taught from

October 15th to December 22nd in the 9th class. The 14th to 31st lessons of the course are devoted to it. The author briefly describes each lesson, its educational and teaching objectives, practical excercises in the course of the lesson, questions and its assessment.

didactics of geography - geography instruction - secondary school - 9th class - regional geography + socialist countries - thematic plan - teaching lesson - practical excyrcises - USSR. 147707.

168. PAVLOVICH, T.A.:
Primernoe tematicheskoe planirovanie na II chetvert po kursu VIII klasa (The model thematic planning of lessons in the second quarter year in the course for the 8th class) Geografiya v shkole, 49, 1982, No. 6, pp. 39-52.

This model plan has been drawn up for the months of October, November and December, ending on December 29th and includes a total of 14 teaching lessons. During this time the following should be taught: "The geography of agriculture" (4 lessons), "General problems of the geography of different industries in the national economy" (2 lessons), "The geography of transportation" (3 lessons), "Economic regions in the USSR and their formation" (2 lessons), "Economic regions in the European part of Russia - central regions" (3 lessons). For each lesson the author cites its brief content, its teaching and educational objectives, teaching media to be used, basic terms and notions and recommended activities for pupils and teachers, as well as questions and answers for marking.

didactics of geography - geography instruction - basic school - 8th class - socio-economic geography - thematic plan - teaching lesson - USSR. 147707.

169. PAVLOVICH, T.A.:
Primernoe team tematicheskoe planirovanie urokov po pervym temam kursa VIII klassa (The model thematic planning of lessons for the first topic in the 8th class course)
Geografiya v shkole, 49, 1982, No. 5, pp. 39-52.

In the USSR the geography textbook for the 8th class is called The Economic Geography of the USSR, it was published in 1981. The author here provided plans for lessons 1 to 19. For each lesson,its topic, teaching and educational objectives, teaching media and questions and answers for the purpose of marking are cited.

didactics of geography - geography instruction - basic school - 8th class - socio-economic geography - thematic plan - teaching lesson - USSR. 147707.

12.2 Preparations of teacher for class, for instruction and for various organizational forms of instruction

170. **AMTHAUER, H.:**
Üben den Meereseinfluss auf das Landklima Material zu einer differenzierten Behandlung des Themas "Meersklima - Landsklima" im Geographieunterricht (On the influence of the sea on terrestrial climate. Material for the differentiated preparation of the topic "Marine climate - continental climate" in geography instruction) Geographie im Unterricht, 7, 1982, No. 9, pp. 346-349. Lit. 8, 3 figs.

The article deals with the influence of the sea upon the climate on land, for the purpose of preparing a teaching lesson. First the author discusses latent heat and its importance for the thermal economy of the Earth. Temperature data from 10 meteorological stations are compared and their distances from the sea coast are discussed. These measurements indicate the decisive influence of the sea upon the climate on land. In the winter this influence is the outcome of the transport of latent heat from the sea to the land. This freed latent heat causes the rapid heating of cool sea air in the summer. In the winter it causes a slowing down of the cooling process of the relatively temperate sea air. Three fourths of the atmospheric transport of heat concerns latent heat. Each drop of water in the course of condensation from vapours gives up as much heat as would be necessary for the evaporation of the same amount of water into vapour, i.e. 539 to 600 cal/g. Each gram of water vapours, which are condensed in 1 kg of air will heat the air by 2.5 °C. The temperature of the continents is influenced by the sea up to a distance of 4000 kilometers away from the sea.

didactics of geography - geography instruction - physical geography - climatology - climate + sea - climate + land - atmosphere - GFR. 147713.

171. ARNOLD, U.:
Elektrizitätsgewinnung durch Wasserkraft. Ein Unterrichtsentwurf für das Schuljahr (The generation of electrical energy from water power. Recommendations for a teaching topic in the 6th class)
Geographie im Unterricht, *7*, 1982, No. 7, pp. 270-274.
1 worksheet.

The author first analyses various water dams on rivers or streams, the filling of water reservoirs with pumps and also dams which make use of changes in the tide on the seacoast. He also analyses the contribution of water power plants to the total production of energy and their importance for the economy of various countries, as well as the dangers connected with the building of these plants (the drainage of mountain valleys, sedimentation in the water reservoirs created by the dam, the danger posed by earthquakes, etc.). In the Federal Republic water power stations contribute only 4.8 % to electricity production, the remainder is former by thermal power stations which use anthracite (28.4 %), lignite (25,3 %), natural gas (18,7 %), heating oil (8.3 %) and nuclear power plants which provide 11.3 % (other sources = 3.2 %). On different continents the share of water power stations in the production of electricity is the following: Europe - 20 %, Asia - 24 %, USSR - 27 %, Australia and Oceania 30 %, Africa - 35 %, North America - 10 %. The degree of utilization in water power plants is 65- 90 %, in thermal power plants only 40 %. Also in water power plants there are no problems with the cooling of waste water. Another table shows the utilization of waters for electricity production: Asia utilizes the largest share - 35.7 %, and Australia and Oceania the least (4.5 %). The whole Congo river basin has so far not been utilized at all.

didactics of geography - geography instruction - basic school - 6th class - geography of electricity production - water dams - water sources - FRG. 147713.

172. ARNOLD, U.:
Steinkohle - eine Energiequelle zur Stabilisierererzeugung. Ein Unterrichtsentwurf für das 6. Schuljahr
(Anthracite - an energy source for the stabilization of output. Recommendations for a teaching topic in the 6th class)
Geographie im Unterricht, 7, 1982, No. 8, pp. 318-323.
Lit. 5, 1 fig., 2 worksheets.

The author describes in detail the course of several teaching lesson in which the importance of anthracite as an energy source, as well as an important raw material are described. Its special importance for the metalurgical industry is also stressed. In 1979 the world production of iron (without the Chinese Peoples Republic) was 683 million tons , then the USA (122 million tons), Japan (111.7 million tons), FRG (46 million tons). The Chinese Peoples Republic produced 34.3 million tons in this year.

didactics of geography - geography instruction - basic school - 6th class - socio-economic geography - power output - interdisciplinary relations - anthracite - FRG. 147713.

173. BAILEY, P.:

China: A Glimpse Behind the Texts

Teaching Geography, 7, 1982, No. 4, pp. 150-153.

3 figs.

Geography textbooks often overlook aspects which immediately strike the visitor to a country. Textbook authors tend to consider them as too trivial to mention. The author, who is a China expert, attempts to right some generally held misconceptions. He describes the people and stresses that it is not true that all Chinese are dressed alike. He describes their everyday life and customs , describes Chinese food in an interesting manner, as well as urban transportation. A special chapter is devoted to Peking, one of the oldest cities in the world, its shops, gardens and the life of its citizens. The author also discusses the predominant opinion that China is overpopulated: to buy a hat requires the participation of three people - one who offers the good, one who writes a bill and one who wraps up what has been bought. A medium size dam is built by as many as 45 000 people, etc. A special chapter is devoted to rural areas, where the author provides little known information. For instance the huge Hoanho river in the month of May is almost without water.

didactics of geography - geography instruction - teaching media - textbook - regional geography + China. - Great Britain. 147711.

174. BALOGH, B.A.:
Menyiségi és területi változások az Egyesült Államok szénbányászatában (Quantitative and territorial changes in the coal industry in the USA)
Földrajztanítás, 25, 1982, No. 3, pp. 87-91.

On the basis of data from the International Statistical Yearbook for 1981 the author describes far-reaching changes which have occured in the coal industry in the USA. The data on quantitative changes was so startling that the author at first thought that an error had been made. However, he later verified that data showing that the amount of coal mined had increased from 566 tons annually in 1978 to 703 million tons in 1979 was correct. The main reason for this huge increase was the energy crisis, as well as the difficulties encountered in the transportation of petroleum from abroad and the increased prices of petroleum which occured in the course of the seventies. This led to a revival in the output of traditional fuels, above all coal. However, increased demands for large quantities of coal could not be satisfied without the territorial relocation of the mining industry. While in 1960 up to 97 % of all coal was mined in the Appalachian Mountains and the Central Basin, recently new coal fields have been opened. These deposits were known to exist before, but were utilized only for local use. This concerns above all localities in the Rocky Mountains (in Colorado, New Mexico, Arizona and Utah), as well as in the Middle West (Wyoming, Montana, North Dakota) and in Texas. With existing prices it has become profitable to mine coal in these places. Most of the coal is produced by strip mining; this coal has a low sulphur content, which is important from an environmental point of view. In 1979 these localities produced over 25 % of American coal. It is assumed that in the future the amount coal produced will continue to increase.

didactics of geography - geography instruction - economic geography - coal mining - USA - Hungary. 147713

175. BATOROWICZ, Z.:
Uwagi o lekcjach geografii w klasie piatej
(Comments on geography instruction in the 5th class)
Geografia w szkole, 35, 1982, No. 1, pp. 26-29.

The author discusses problems connected with geography instruction in the 5th class and specifically deals with two topics: The Siberian tundra and taiga and the Sahara desert. The teaching of these topics was studied in the Lodż region where various innovative didactical procedures were used. The chapter on the tundra and taiga in the textbook is analysed, as well as this section of the teaching syllabus and the use of pictures, slides of plants and animals. The author also describes stunted plants (shrubs), stunted birch trees, willows and oaks, which are typical for these cold regions. The tundra is defined on the basis of the flora which grows there, specifically shrubs and grasses. In conclusion the size of the tundra in Euroasia is given. The climate of the tundra is described: a very short summer, a small amount of precipitation, a long polar winter and permafrost soil without higher trees. The problem of why higher woody species cannot grow in the tundra is discussed and also the occupations of the local population. The Sahara desert is treated in a similar manner. Another topic is " Among the rice paddies and tea plantations of China". For this topic the textbook is used, a discussion and clarification of individual geographical notions. The lessons have a traditional structure: repetition, discussion, taking notes, an analysis of what has been explained and noted.

didactics of geography - geography instruction - basic school - 5th class - thematic unit - physical geography - tundra - desert - Poland. 147713.

176. BEIL, 1.:
Wie eignen sich Küstenformen für die Anlage eines Hafens ? Beispiel Rostock (When are coastal areas suitable for the building of ports ? The example of Rostock)
Geographie im Unterricht, 7, 1982, No. 5, pp. 176-185.
Lit. 16, 14 tabs.

The author discusses the qualities of the seacoast which make it possible to build ports. He stresses the fact that next to natural geographical conditions, the socio-geographical aspect is extremetly important. But to successfully build a port all the natural factors of a given site must be studied in detail. The tables provided by the author make it possible for pupils to carry out an analysis of these problems. The main problem is formulated in the following manner: where could the newly created GDR build a required sea port ? At present Rostock has become a port for ships from all over the world, it has extensive shipyards, a fish processing plant, and a large Diesel motor plant. The building of the port had to overcome a large number of natural obstacles which could be done only due to the fact that heavy construction machinery was used.

didactics of geography - geography instruction - secondary school - social geography - transportation geography - GDR. 147713.

177. BENDER, B.:
Der Föhn. Ein Unterrichtsentwurf für ein I. Schuljahr
(The foehn wind. A suggestion for instruction in the 8th class)
Geographie im Unterricht, 7, 1982, No. 9, pp. 370-375.
1 fig., 2 worksheets.

The author explains the origins of the foehn wind. He assumes previously gained knowledge of those notions which are necessary to understand the problem, including the origin of the wind, the planetary system of wind movements, air temperature, air pressure, an anticyclone, a depression, humidity, rain front. A number of drawings are used for the explanation of the foehn wind. It originates as moist air blowing from the Mediterranian, rising on reaching the Alps and cooling at the saturated adiabatic lapse rate, and decending on the leeward side, warming at the dry adiabatic lapse rate, thus gaining heat.

didactics of geography - geography instruction - basic school - 8th class - thematic unit - climate - FRG.
147713.

178. BENNISON, D. - RAW, M.:
Shopping Streets: An Approach to the Study of Retailing in Town Centres
Teaching Geography, 7, 1982, No. 4, pp. 165-169.
4 figs., 5 tabs.

Trade outlets and shopping centres are an important component of urban geography. Because of the spread of suburbs, supermarkets and increased numbers of automobiles, existing methods of determining the allocation of shops are no longer sufficient. Urban planning has often refused to allocate new shopping streets and centres into the spreading suburbs and has kept them in the original downtown areas, which has often led to far-reaching consequences for the morphology of the city and its structure. The authors here suggest a method of collecting data, its analysis and interpretation; they also suggest the classification of trade outlets into 6 different categories. The streets are divided into primary and secondary shopping streets, according to 10 different criteria. Also other indicators are suggested according to which it is possible to make decisions concerning the final optimum allocation of schops.

didactics of geography - geography instruction - geography of settlements - retail trade - teaching method - field work - Great Britain. 147713.

179. BRAUMEIER, U.:
Rendlerverkehr in Grosstädten. Anregungen zur Behandlung des Themas in einer 6. Klasse (Shuttle service transportation in large cities. Instructions for a teaching topic in the 6th class)
Geographie im Unterricht, 7, 1982, No.3, pp.103 - 110. 5 figs., 2 worksheets

Shuttle services serve to transport large numbers of people to and from work in large cities and thus concern the majority of people in the FRG. The author provides a number of suitable questions on the basis of which it is possible to arrive at the notion of a shuttle. First the physical notion of a pendulum is explained. From a geographical point of view the author distinguishs between sections of the city which are predominantly residential, industrial or administrative. Many people commute as much a 100 kilometers per day and spend up to two hours a day in transportation media. The author describes the extension of highway networks in the vicinity of the city, "green waves" in traffic, interchanges, the construction of car parks, setting the beginning of the workday differently in different large organizations, moving large organizations out of the downtown area, creating pedestrian areas, limiting the use of cars in downtown areas and urban mass transportation. Pupils have 2 worksheets available to help in learning this subject-matter.

didactics of geography - geography instruction - settlement geography - secondary school - 6th class - thematic unit teaching medium - worksheets - FRG.
147713.

180. BRAUMEIER, U.:
Wirtschaftliche Verflechtungen zwischen Entwicklungs- und Industrieländern. Entwurf eines Arbeitsblattes für die 7. Klasse (The economic interconnection between the industrial and developing countries).
Geographie im Unterricht, 7, 1982, No. 5, pp. 227-238.
2 tabs., 9 worksheets.

Instruction on the problems of the developing countries within the framework of geography is highly warrented. On the basis of using worksheets, pupils can learn about the relationship between developing countries and the industrially developed countries. The author stresses such aspects as the supply of raw materials, the growth of the manufacturing industries, financial relations, the dependency of industrially developed countries upon the developing countries as suppliers of raw materials, the problem of monoculture, the heritage of the colonial past, comparative prices of raw materials and manufactured goods, the terms of trade,price fluctuations on international markets, tariff barriers to free trade, the Lomé agreement. In using the worksheets pupils require the use of maps, pictures and other teaching media. Tables indicate the three most important commodities in the exports of the developing countries for the period 1974-1976, the import of raw materials to the Federal Republic in 1978 and the exports of the Federal Republic to the developing countries. In 1973 the FRG had to export 12 cars in exchange for 1000 tons of petroleum, while in 1977, this figure was 25 cars and in 1981, 46 cars ! For one Swiss wristwatch Tansania had to export 7.5 kilograms of coffee in the period 1961-1964, but in the period 1971-1974 already 14,2 kilograms.

didactics of geography - geography instruction - thematic unit - socio-economic geography - regional geography + developing countries - instruction medium - worksheet - FRG. 147713.

181. BRÁZDIL, R.:
Zachrání se Kaspické moře ? (Can the Caspian Sea be saved ?)
Přírodní vědy ve škole, 33, 1981-1982, No. 7, pp.272-274.
Lit. 9, 3 figs., 1 tab.

The Caspian Sea is the world´s largest lake. But due to a large number of physical, geographical, anthropogenous and other factors its area is constantly decreasing and its water level is declining. At present the surface of the sea is 29 meters below the level of the world´s oceans. On the basis of its morphometric conditions the sea is divided into a northern part with an average depth of 5 to 6 meters and an area of 74 000 km^2, a central part, with an average depth of 190 m and an area of 137 000 km^2 and a southern part with an average depth of 350 m and an area of 147 000 km^2. The lake is receding, especially in the northern part where with every decline in the depth of the water by 1 mater the drainage of an area of 10 to 17 000 m^2 occurs. The author deals in detail with the history of the decline in the amount of water in the Caspian Sea and its causes. The main reason is a decline in the amount of water provided by the Volga river. From a geographical point of view the Kara-Bogaz-Gol bay in the Caspian Sea is very interesting. At present the water in the bay evaporates more quickly than new water is supplied by the sea, so that now the surface of the bay is 4.5 meters lower than that of the sea. The Caspian sea is rich in fish and in petroleum. Approximately 20 thousand tons annually are drilled here, and this petroleum is exceptionally good quality. The Caspian Sea is also an important transportation medium between the Trans--Caucasian and Central Asian Soviet Republics. At present experts are seeking solutions to the problem of saving the Caspian Sea and stopping the further decline in the amount of water found in the sea.

didactics of geography - geography instruction - physical geography - hydrography - lake - USSR.
147755.

182. BULGAKOV, V.V.:
Metodika izucheniya energoproizvodstvennikh tsiklov
na urokakh ekonomicheskoy geografii SSSR
(The methodology of teaching energy production cycles
in the economic geography of the USSR)
Geografiya v shkole, 49, 1982, No. 2, pp. 42-45.
1 fig.

The author devotes his attention to a section of the geography syllabus which is rather difficult: the notion of energy production cycles. He explains how to use this term and how to explain it to pupils on the basis of a number of examples from various industries, forestry, agriculture, etc. He uses various diagrams and tables for this purpose.

didactics of geography - geography instruction - socio--ekonomic geography - USSR. 147757.

183. TSVETANOVA, S.:
Urok na tema: "Zhivotnovodstvo" v devti klas
(A lesson on the topic "Animal husbandry" in the 9th class)
Obuchenieto po geografia, 25, 1982, No. 5, pp. 18-22.
3 tabs.

The lesson begins with an analysis of the documents of the 12th Congress of the Communist Party of Bulgaria. Pupils are then given oral assignments concerning the geography and the significance of breeding farm animals, the structure of agriculture, the specific aspects and most important factors in this branch of agriculture, etc. In the next part of the lesson the teacher explains to pupils the importance of agriculture and specifically animal husbandry, its relationship to the engineering, textile and food stuff industries and the need to intensify agricultural production. In the final part of the lesson the class discusses the factors which determine the development of animal husbandry. For this purpose the teacher should prepare comparative tables which show the development of agriculture in 1939 and in 1980, as well as maps which indicate the natural conditions existing in Bulgaria for animal husbandry and also diagrams on the documents of the 12th Party Congress. On the basis of these procedures pupils should arrive at the conclusion that the most important factor in the development of animal husbandry is a sufficient basis of fodder production.

didactics of geography - geography instruction - basic school - 9th class - thematic unit - animal husbandry - socio-economic geography - Bulgaria. 147713.

184. CHILINGIROVA, N.:
Izuchavane na rodniya kray chrez obuchenieto po geografia v sedmi klas (A study of the native region in geography instruction in the 7th class)
Obuchenieto po geografia, 25, 1982, No. 4, pp. 28-32.

One of the important educational and teaching principles of the contemporary school system is the close linkage between what pupils learn and the every-day life and practical experiences of building socialism. The content and general educational and teaching aspects of geography provide ample opportunities for linking what is learnt with the surrounding natural, geographical, social and cultural environment. In this context the physical geography course provides numerous opportunities for education towards nature. The textbook for the 7th class has also been written with this objective in mind; the author cites several examples, for instance the topics "The atmosphere and the climate", "Water on Earth", "Manifestations of flowing waters", etc. The author recommends dividing pupils into groups which work on assignments concerning the application of physical geography knowledge upon conditions in Bulgaria. To this should be added direct observations of natural objects.

didactics of geography - geography instruction - basic school - 7th class - regional geography - organizational form - group instruction - Bulgaria. 147713.

185. DAMYANOVA, M.:
Metodicheskay razrabotka na uroke "Kitayskaya narodna respublika" v osmi klas (The methodological preparation of a lesson on the Chinese Peoples Republic)
Obuchenieto po geografiya, 25, 1982, No. 1, pp. 32-36.
1 tab.

This lesson should be prepared two to three weeks in advance. The purpose of the lessons: 1) confirming pupils´ knowledge on the geographical location, natural conditions and raw material resources found in China, 2) strengthening and extending pupils´knowledge concerning the economy of the country by an analysis of tables, diagrams, the use of economic maps, 3) cultivating a materialist worldview. When introducing this topic, the socialist countries of Asia should be mentioned and briefly described and their main differences in comparison to China stressed. Natural conditions can be learnt by pupils independently, by using maps, etc. The social, political and national economic problems of the country should be explained by the teacher with the aid of specific data in tables and diagrams. A brief summary is carried out on the basis of various comparisons and drawing conclusions on their basis.

didactics of geography - geography instruction - basic school - 8th class - regional geography - thematic unit - Chinese Peoples Republic - Bulgaria. 147713.

186. DILKES, J.:
Teaching Geography to Remedial First-and-Second-Year Pupils in a Comprehensive School by a Non-specialist
Teaching Geography , 7, No. 3, pp. 103-106.
3 figs.

In the author's opinion geography instruction can contribute to the mental development of variously mentally afflicted children. Since geography teachers are not usually trained for teaching afflicted children, the author provides various methodological advice concerning the use of a map, how to use a compass, how to understand the weather, about mountains, plains and other geographical terms, including transportation and world events. The article is for geography teachers who have not taught remedial classes before.

didactics of geography - geography instruction - remedial classes - media teaching of defective children - 6th and 7th class - teaching media - Great Britain. 147713.

187. DINEV, L.:
Kovachevtsi - rodnoto myasto na Georgi Dimitrov
(Kovachevtsi - the native village of Georgi Dimitrov.)
Obuchenieto po geografiya, 26, 1982, No. 3, pp. 38-44.
1 fig.

The village of Kovachevtsi lies in the picturesque valley of the Svetla river, which is one of the right tributaries of the Struma river. After World War II, the river bed of the Svetla was regulated. On the surrounding slopes young oak forests are found, among which pastures, meadows and peasant family houses can be seen. At the southern end of the region a dam has been built which provides opportunities for swimming and recreation. The town of Tsirishchik is the local shopping center. Before the liberation, both these communities were Turkish. The larger part of this article is devoted to the historical development of both communities since 1880 and their economic and cultural development at present.

188. DRABIK-FENKES - HARD:
Natursteine als Indikatoren (Natural rocks as indicators)
Geographische Rundschau, 34, 1982, No. 2, pp. 69-75.
2 figs., 4 tabs.

Cobblestones and pavements found especially in shopping centres have been used by the author as an aid in teaching about minerals and rocks used in urban construction. Pupils are first acquainted with the most widespread minerals and rocks (sandstone, travertine, limestone, granite, basalt, greestone), look for them and identify them in an urban environment. Pupils found for instance that what at first looked like a uniform pavement, was in fact composed of six different minerals and rocks, including marble.

didactics of geography - geography instruction - geology - minerology - settlement geography - FRG. 147757.

189. DUSHINA, I.V. - PLAGONOVA, I.A.:
Izuchenie prirodnikh razlichiy meterikov (A study of the natural differences between the continents)
Geografiya v shkole, 49, 1982, No. 3, pp. 26-30.

The modern version of the teaching syllabus attempts to simplify the very complex problems of the natural differences between the continents, which are now studied from two aspects: natural regions and non-zonal natural complexes. In the study of natural regions attention is devoted especially to characteristics of the law of geographical zonality; the relationship between the distribution of natural regions and climatic zones is stressed. When studying the topic "Differences in the natural conditions of the continents", manifestations of non-zonal factors are stressed, especially specific aspects of the structure of the earth´s crust and relief and the influence of the oceans, as well as terrestrial structures and everything which contributes to the uniqueness of individual areas of the Earth. It is the teacher´s task to find such natural complexes on which the specific aspects of the natural environment of a specific continent can best be shown. A number of examples are cited, as well as methodological advice.

didactics of geography - geography instruction - physical geography - geography + continents - USSR.
147713.

190. FAHN, H.J.:
Kennzeichen von orientalischen Entwicklungsländer - gezeigt am Beispiel von Reisebeschreibungen. Eine "orientalische" Abschlusstunde. (Characteristics of oriental developing countries - demonstrated on the basis of a description a tourist trip . A concluding, "oriental" lesson)
Geographie im Unterricht, 7, 1982, No. 1, pp. 465-468.

This teaching lesson is planned as the final lesson of the whole thematic unit "The Orient". Essentially this is an interesting attempt to make use of the planning of a tourist trip to sum up and extend the subject-matter concerning the Orient. The author at the same time describes the characteristics of developing countries, such as for instance a chronic shortage of consumer goods, a strong contrast between the old and the new way of life, an insufficiently developed infrastructure, the great influence of religion upon the way of life and the negative effects of the climate. The article also contains five brief articles for pupils: A Bazaar at the Airport, By Camping Bus Across Saudi Arabia, Instructions for European Drivers in Egypt and Afganistan, Problems of Europeans Accomodating to the Climate and Life in Saudi Arabia and Instructions for Tourists in Saudi Arabia.

didactics of geography - geography instruction - secondary school - thematic unit - Orient - regional geography - developing countries - FRG. 147713.

191. FRAEDRICH, W.:
Unterrichtsmaterialen und Medien zum Thema "Stadt". Eine Auswahl (Teaching material and media for the topic "The city." A selection).
Geographie im Unterricht, 7, 1982, No. 3, pp. 123-127.

A list of media suitable for class-work on the topic "The city". It contains textbooks, atlases, transparencies, films and slides provided by various firms and publishing houses in the Federal Republic of Germany.

didactics of geography- geography instruction - settlement geography - city - teaching medium - textbook - atlas - transparency - film - slides - FRG. 147711.

192. FRAEDRICH, W.:
Welche Veränderungen bewirkt der Erdölexport in den arabischen Staaten ? Eine Untersuchung am Beispiel Kuwaits. Eine Unterrichtseinheit für die 7. Klasse
(What changes have been caused by increased exports of petroleum from the Arab countries ? A study on the basis of the example of Kuwait. A thematic unit for instruction in the 7th class)
Geographie im Unterricht, 7, 1982, No. 11, pp.447-454.
Lit. 10. 2 figs., 7 worksheets.

The author suggests a 5 lesson thematic unit which demonstrates the changes which have occured in the Arab countries as a consequence of increased revenues from petroleum exports. The problem is also commented and demontrated with the aid of worksheets. The purpose of instruction is to achieve an understanding of the structural changes which are taking place in petroleum exporting countries. The transition from traditional social and economic structures towards more modern ones in many Arab countries has been made possible by the enormous increases which have occured in foreign currency revenues. On the basis of the example of Kuwait, the author shows which social changes have led to modernization and what the basis of this modernization is. Kuwait has been independent since 1961, prior to which it was a British colony. It has an area of 17 818 km^2 and 1 065 000 inhabitants, of which half are foreigners. Since November 11th 1962 it is a hereditary emirate. Annually 10 000 million tons of petroleum are produced which represent approximately 10 % of world production. The country has 11 hospitals and sanatoriums, 49 dental clinics, 27 obstetrics clinics, 44 health care dispensaries, 4 500 hospital beds, where 7 million patients annually are treated, a mobile X-ray service and free education from kindergarten up to the university. Students receive boarding, food and apparel free of charge, there are 100 000 male pupils and students and 85 000 female pupils and students attending school. There are 52 kindergartens in the country, 111 basic schools, 90 secondary schools and 35 other schools and institutions of higher learning.

didactics of geography - geography instruction - regional geography - Kuwait - thematic unit - socio-economic geography - petroleum - modernization + state - FRG. 147713.

193. FRIČ, D.:
K vlastivědnému plánu Prahy - I. část (Comments on a civics map of Prague - Part I.)
Přírodní vědy ve škole, 33, 1981-1982, No. 9, pp.353-358.
2 figs.

The author offers a text to accompany a map of Prague, produced by Kartografia for use with the new school curriculum. The existing situation in the capital city is shown in an untraditional manner: various colours designate whether an area was constructed under socialism or under capitalism. Topography is shown by contour lines. Besides important buildings, also selected historical monuments are shown, as well as the outline of the Prague urban reservation. Also the origins and development of Prague are described briefly. Prague has an area which represents 0.4 % of the territory of Czechoslovakia and concentrates 7.8 % of its inhabitants. The physical geography of the city is described in detail, as well as its geology, relief, climate, hydrosphere, biosphere, economic situation, socio-economic apsects, natural resources, inhabitants, demography, occupational structure of its inhabitants, industrial production, fuel and energy consumption, consumer aspects, etc.

didactics of geography - geography instruction - teacher + geography - civics - map + Prague - teaching medium - methodological manual - settlement geography - city + Prague - Czechoslovakia. 147757.

194. FRIČ, D.:
K vlastivědnému plánu Prahy - II. část
(Comments on a civics map of Prague - Part II)
Přírodní vědy ve škole, 33, 1981-1982, No. 10, pp.388-393.
Lit. 14, 1 tab., 4 figs.

The second part of an article which provides comments on a new map of Prague. Here the author concentrates on agriculture within the capital (mostly the greenhouse production of vegetables. which in the future should cover 90 % of the city´s requirements). Farm animal breeding is also important, as well as the 900 000 pieces of poultry on the outskirts of the city; at Horní Počernice, a Prague suburb, race horses are bred, at Lysolaje there is a large-scale laboratory animal facility. Prague has 15 % of its area covered by greenery, of which 10 % are forests. Prague´s water supply comes from surface waters, annually 190 million cubic meters of drinking water are produced. The author describes the sources of drinking water which Prague uses (the Vltava river with a treatment plant at Podolí, the Jizera with a treatment plant at Kárané and the Želivka reservoir). Prague has a highly developed network of various types of services including medical services, retail trade, etc. There are 11 bridges over the Vltava river and a 12th under Barrandov is now being built. Prague is also the largest railway junction in the country. Prague roads measure 2326 km, it has 274 817 automobiles, 2361 buses, 28 760 motocycles. Its mass transporation system annually transports 1 billion 138 million persons. The backbone of the mass transportation system is the metropolitan (underground), which now has 20 kilometers. Prague is the site of traditional cultural, sports and social events and the point of entry for many foreign guests. Prague has 900 sports fields, 177 indoor sports facilities, 17 swimming pools, 4 artificial skating rinks and two large recreational areas. The environment in Prague is highly polluted, there is a high fallout of ash. The author also describes the development of housing estates in Prague and provides a table of Prague´s 10 districts.

didactics of geography - geography instrucfion - teacher + geography - civics + map - teaching medium - settlement geography - city + Prague - methodological manual - Czechoslovakia. 147757.

195. GAFFAGA, G. - CLOSS, H.M. - GAFFAGA, P.:
Polnische Städte (Polish cities)
Geographie im Unterricht, 7, 1982, No. 8, pp. 297-315.
1 figs. 11 tabs., 6 maps, 6 photos.

The authors suggest a five lesson unit which will acquaint pupils with the geography of Polish cities and at the same time with the problems of travel in a socialist country. First the location of various cities is described, their history and traditions and problems of tourism. For increasing pupils´ activities, worksheets have maps of Warsaw and Lodž. A table of the largest cities in Poland and their development in the period 1950 - 1978 is provided, as well as a table of Polish sea ports, the development of tourism in Poland, coal extraction in Upper Silezia, the development of urban and rural areas in Poland and transportation in Poland. A table also shows distances between various cities in Poland.

didactics of geography - geography instruction - cities + Poland - thematic unit - FRG. 147713.

196. HAVERSATH, J.B.:
Die orientalische Stadt. Unterrichtliche Behandlung in der 8 Jahrgangsstufe (Oriental cities. Preparations for a lesson in the 8th class)
Geographie im Unterricht, 7, 1982, No.8, pp. 454-459.
Lit. 26, 4 figs.

The author provides the outline for a 4 lesson unit concerning the origins, changes and development of oriental cities and uses a generalized development model for this purpose. The objective of teaching this topic is to discuss the problems facing oriental cities at present, their life, etc. The city of Abu Dhabis is described in detail as an example. Also Izraeli cities are discussed as models of thoroughly modernized oriental cities with an ancient heritage. This topic is designed for the 8th class of basic school. Also such notions as oriental bazaars, coffehouses, Beduin camps, etc. are discussed.

didactics of geography - geography instruction - settlement geography - city + Orient - FRG. 147713.

197. HAVERSATH, J.B.:
Städte im römischen Duetschland (Towns in Roman Germany)
Geographie im Unterricht, 7, 1982, No. 4, pp. 151-156.
Lit. 21, 3 figs., 1 worksheet.

Roman towns are clearly distinguishable from those founded later. On the basis of archeological excavations it is possible to precisely determine and identify Roman towns. This offers a very interesting topic for geography instruction for secondary schools, especially if the school is found near a Roman town where first contacts with historical geography can be achieved directly. The historical geography of towns is especially interesting and important in central Europe. The aim of the thematic unit is to acquaint pupils with the basic ground plan of Roman towns, which in the majority of cases has been maintained throughout history. Among the Roman towns found in Germany are Xanten = Conolie Alpia Traiana, Cologne on the Rhine = Colonia Claudia Ara Agrippinensium, Coblenz = Confluente, Aachen = Aquae Granni, Andernach = Antunnacum, Trier = Augusta Trevorum, Worms = Borbetomagus, Speyer = Noviomagus, Mainz = Mogontiaem, Augsburg = Augusta Vindelicem, etc. In studying the history of towns and cities it is important to understand the various stages of their development and to understand the functional changes which have taken place throughout history. A knowledge of the history of towns provides opportunities to better understand their modern development. Ancient(Roman) cities were characterized by right-angle intersections and a general chess-board pattern. The author suggests the following outline for studying this interesting topic: towns in Roman Germany, the ground-plan of Roman rowns, a comparison of Roman and modern town patterns, the influence of the ground plan of Roman towns upon the network of roads in modern towns and cities.

didactics of geography - geography instruction - settlement geography - towns + history - historical geography - ancient Rome. - FRG. 147713.

198. HORNÍK, S. - TRNKA, P.:
Rostlinstvo v podmínkách tropů (Plants in the conditions formed by the tropics)
Přírodní vědy ve škole, 33, 1981-1982, No. 4, pp.148-151.
Lit. 9, 3 figs.

The article was written for teachers as an aid in studying the new teaching syllabi. It provides basic information on the vegetation found in the tropics and explains some bio-geographical terms. The authors for instance distinguish flora as a sum of plant taxons found in a specific region and vegetation (vegetation cover) - as a set of plants growing in the landscape and determining it image. Vegetation is determined by the soil and climate conditions and differs on the basis of horizontal zones and vertical steps. The author describes in detail the tropical jungle with its permanent humidity and its specific climate, its vegetation levels determined by altitude and other vegetation types found in the tropics, the anthropogenic transformation of the tropical rain forest as well as the cultivation of useful plants (from the point of view of man) in the tropics,which include the rubber tree, oil producing plants, trees and shrubs producing spices, coffee, cacao and tea,as well as other related products, starch producing tubers, tropical fruits and herbs and also trees providing hard and rare woods.

didactics of geography - geography instruction - phytogeography - thematic unit - tropics - crop production - Czechoslovakia. 147713.

199. HORNÍK, S. - TRNKA, P.:
Rostlinstvo v podmínkách tropů. II. (Plants in the conditions provided by the tropics - part II)
Přírodní vědy ve škole, 33, 1981-1982. No. 8, pp.311-314.
Lit. 7, 1 fig., 1 tab.

The article is written for teachers as an aid in studying the new teaching syllabus. In the second part of the article the authors describe the zone of alternately humid tropics as a climate with typical alternation of dry and wet seasons in the course of the year (especially with monsoons). The vegetation of this zone has semi-evergreen forests, wet and dry forests with leaf-shedding trees, etc. In conclusion the authors describe altitude dependent zones and the crop plants which grow there.

didactics of geography - geography instruction - teaching syllabi - thematic unit - phytogeography - tropics - crop production - Czechoslovakia. 147713.

200. HÖRETH, K.:
Untersuchungen zur Errichtung einer Fussgängerzone in Bayreuth. Anregungen zur Bearbeitung des Leitthemes "Die Stadt und ihr Umland" in Klasse 5 (A study for creating a pedestrian zone in Bayreuth. Instructions for preparing the leading topic in the thematic unit "The city and its vicinity" in the 5th class)
Geographie im Unterricht, [illegible], 1982, No. 3, pp. 91-96.
Lit. 8, 2 figs. 2 worksheets.

The author provides a survey of the opportunities for using the subject-matter of the city to teach various interesting topics. For a special project on this subject he recommends first determining the objective of the project, then preparing questions and questionnairs, their administration, assessment and critical findings made on their basis. Pedestrian zones are an important problem of modern cities and are part of strivings to make downtown areas more humane and limit the negative aspects of automobile traffic. General problems of pedestrian zones are discussed, as well as the specific problems found in Bayreuth.

didactics of geography - city - transportation - FRg.
147713

201. HYNEK, A.:
Půdy vlhkých tropů a savan. 1. Na pomoc učitelům při studiu nových osnov (The soil in damp tropics and on the savannas - part I. An aid for teachers in studying the new teaching syllabus)
Přírodní vědy ve škole, 33, 1981-1982, No. 1. pp. 30-35.
4 figs.

This article is addressed to teachers who are preparing lessons according to new teaching syllabi and concerns pedological studies in the tropics and new methods of studying the natural environment in tropical zones, The soil (according to Rozanov) is defined as a complex, polyfunctional, open, four-stage structural system in the surface layer of eroded rocks, which is a complex function of these rocks, as well as organisms, the climate, the relief and time. The science of the pedosphere is called pedology. Pedography (which is a part of geography) studies the creation and development of the soil cover in connection with the creation and development of the landscape, as well as the relation between the soil and the geosystem. The author argues against the myth of the highly fertile soil in the tropics, since just the opposit is true - the soil here has a high acid content and is poor. Poor soil and rich vegetation as an ecosystem in the tropics typically are components of an almost closed cycle of nutrients, growth and decline.The majority of the nutrients in living matter in the whole tropical ecosystem are continuously recycled by plants and animals. The soil in the tropics has a deeper and more intensive erosion profile, a lower cation exchange capacity, a higher anion exchange capacity, a lower dampening capacity and a lower usable water capacity. Very often this soil has a very hard crust a high kaoline content and lower shares of montmorillorite and illite, lower shares of quartz and eroded minerals, high shares of iron, aluminium and titanium, greater looseness, a smaller accumulation of waste and other organic remnants, a low degree of plasticity and lower fertility. The author also explains the terminology used when discussing tropical soils and specifically the terms laterite and laterite soils.

didactics of geography - geography instruction - teaching syllabus - physical geography - soil - soil type - tropics - savannas - Czechoslovakia. 147713.

202. HYNEK, A.:
Půdy vlhkých tropů a savan - II. Na pomoc učitelům při studiu nových učebních osnov. (The soil in damp tropics and on the savannas - part II. An aid for teachers in studying the new teaching syllabus)
Přírodní vědy ve škole, 33, 1981-1982, No. 2, pp. 68-71. Lit. 14, 4 figs., 1 tab.

In this article the author describes a FAO-UNESCO classification of moist soils found in the tropics and their utilization and also provides a commentary for a cartogram of soil systems in the tropics and savannas. The soils in these areas are very complicated and their utilization poses a number of problems. There are no adequate maps for teaching purposes which show the special aspects of soil in tropical zones and so it is necessary to make them. It would then be possible to teach about tropical soils and the problems connected with them.

didactics of geography - geography instruction - teaching syllabus - physical geography - soil types - tropics - savannas - Czechoslovakia. 147713.

203. CHALUPA, P.:
Lokalizace odvětví československého průmyslu
(The territorial allocation of various branches of Czechoslovak industry)
Přírodní vědy ve škole, 33, 1981-1982, No. 5, pp.189-192.
Lit. 26, 4 figs.

The modernization of geography instruction requires developing pupils´ theoretical thinking and drawing their own conclusions on the basis of analytical and synthesizing activities, in other word a transition from a descriptive approach and encyclopedic surveys. A modern approach to a social and economic geographical area and its interaction with a natural system require an understanding of its creation and allocation factors as they are studied by settlement geography, as well as the geography of agriculture, industry and transportation. It is important to understand the historically developed allocation optimum for a given industry and to explain the cause of subsequent development stages. By analysing the origins of the relationship between regional physical geography and socio-economic geography structures and allocation factors it is possible for pupils to assess in a synthetic manner and to understand existing realities.

On the basis of various examples, the author explains to geography teachers opportunities for making use of these relations within the geography course. He also demonstrates the effect of allocation factors on the fuel and energy industry (their gravitation towards primary fuels and energy with the necessary use of large amounts of water), the metallurgical industry (at first gravitation towards ore deposit localities, later towards energy sources), the engineering and metal processing industries, the chemical and rubber industries, the textiles and wearing apparel industry, the food processing industry and other branches of the economy, all from the point of view of their historical development and present territorial distribution.

didactics of geography - geography instruction - socio-economic geography - allocation + industry - Czechoslovakia. 147713.

204. ILIEVA, Y.:

Pregovoren urok na tema "Otraslova struktura na stopanstvoto na Blgariya u printsipi v teritorialnoto razpredelenie na proizvodstvo (A discussion-lesson on the subject "The structure of agricultural production in Bulgaria and the principles of its territorial allocation)

Obuchenieto po geografiya, 25, 1982, No. 5, pp. 23-26.

The purpose of this lesson is to strengthen pupils' knowledge on the subject of the Bulgarian economy and general notions used by economic geography, as well as to form habits for group work and independent work and to develop personal traits which are connected with this. Two weeks before the lesson itself pupils are divided into six groups and each group is assigned a consultant, who helps with the assignments and organizes work. The preliminary preparations lead to the active participation of all pupils. Each group has a different assignment and gathers its own documentation and information sources. A special jury then assesses the outcome of the pupils' activities and decides how they should be utilized in class. The article contains several examples.

didactics of geography - geography instruction - thematic unit - socio-economic geography - agricultural production - teaching medium - worksheet - group instruction. 147713.

205. KADZIOŁKA, J.:
Widnokrąg i kierunki widnokręgu. Lekcia w klasie IV.
(The horizon and directions on the horizon. A teaching lesson in the 4th class)

Geografia w szkole, 35, 1982, No. 5, pp. 237-239.

The author provides an outline of a teaching lesson for the 4th class of basic school, where pupils do not yet have any previous knowledge of the subject-matter which could be utilized. The subject here is the horizon and its changes which occur when the position of the observer on the ground changes, as well those which are the consequence of changes in the observer's altitude. Pupils determine the main and supplementary cardinal points, they learn to find their way according to the position of the stars, the sun and with a compass. The author describes such a lesson, in which the close vicinity of the school is used for field work. The pupils learn what a horizon is, what purpose it serves, why it is a subject of study and how to specify cardinal points. Also skills in the use of a compass are learnt.

didactics of geography - geography instruction - basic school - 4th class - thematic unit - physical geography - organizational form - field work - cardinal points - Poland. 147713.

206. KANDARAČOVÁ, V. - MICHAELI, E.:
Príspevok ke geografii Prešova (A contribution to the geography of the town of Prešov)
Přírodní vědy ve škole, 33, 1981-1982, No. lo,
pp. 383-386. Lit. 14
6 graphs, 2 diagrams, 1 tab., 2 maps.

The town of Prešov is in the Košice basin. The first historical record of a settlement at Prešov comes from the year 1246. The authors describe the history of the town until the present, its physical geography, the geological structures of the town and its vicinity, its relief, climate, the water regimen of the landscape, types of soil, flora and fauna. The territory of modern Prešov has an area of 80.3 km^2 and on October 1st, 1981 a population of 73 316. The authors also describe in detail its economic geography and environmental situation, which is highly polluted because part of the town is in a zone where pollution values exceed maximum allowable concentrations.

didactics of geography - geography instruction - settlement geography - town + Prešov - environmental control - socio-economic geography. 147713.

207. KAY, D. et al.:

Teaching Catchment Hydrology: Two Dynamic Models for Classroom Use

Teaching Geography, 7, 1982, No. 3, pp. 118-124.
8 figs., 1 tab.

The foundations of hydrology have, in the majority of cases, never found their way into the textbooks used in the upper classes of basic school. However, hydrology is an area which serves very well to demonstrate natural processes and changes, which are caused by water. A team of authors has now prepared two dynamic hydrology models for use in class which are based on a knowledge of physical laws. This is why the authors call them dynamic models. On the basis of these models it is possible to study in detail the soil, structural and physiographic units, geomorphological processes, meteorology and climatology and finally the soil in relation to vegetation. The first model is theoretical and is based on the use of maps and sketches, the second is constructed from various inexpensive materials according to a drawing which is provided by the authors. With its use pupils learn about the nature of hydrological laws. Its advantage is that this teaching aid can be used for various classes and topics within the framework of geography instruction.

didactics of geography - geography instruction - secondary school - physical geography - hydrography - model + instruction - Great Britain. 147713.

208. KOCH, R.:
Entwicklungsplanung in strukturschwaches Räumen, Industriensiedlung und -erweiterung in der Region Westpfalz (Development plans in structurally weak areas, The allocation and distribution of industry in the Western Palatinate region)
Geographie im Unterricht, 7, 1982, No. 10, pp.401-407.
3 figs.

The article provides an outline of the concluding part of a thematic unit for geography instruction concerning the economically and structurally weak Western Palatinate (Westpfalz) region in the Federal Republic. It can serve as an example of a region with insufficiently developed job opportunities and infrastructure. The article contains various suggestions for pupil assignments and for their active work in the classroom. Pupils learn to describe an underdeveloped region and discuss methods of overcoming underdevelopment. At present for instance the Opel automobile factories are moving to Kaiserlautern. Pupils describe what consequences this will have for the region. In the period 1969-1979 the Rhineland-Palatinate region opened 300 new industrial plants with 42 000 new jobs.

didactics of geography - geography instruction - regional geography - industrial geography - FRG.
147713.

209. KOSTOVA. D.:
Urok na tema "Narodno stopanstvo" v osmi klas
(A lesson on the topic "The national economy" in the 8th class)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 32-37.
3 outlines.

This lesson is important from the point of view of the requirements of the Ministry of Education concerning the educational and teaching process in geography instruction. The teacher should first specify objectives, for instance to strengthen, extend and test pupils practical knowledge concerning the practical factors which influence the development and territorial allocation of production and to understand the notions "national economy", "national income", "gross product", "net product", etc. and also to teach pupils to use diagrams, tables and outlines, as well as the relevant literature. The author recommends visiting a local factory before beginning this topic. In class the author recommends the use of diagrams to show the distribution of national income under capitalism and under socialism, rates of growth of national income, etc. In the final lesson the international division of labour is discussed.

didactics of geography - geography instruction - basic school - 8th class - thematic unit - socio-economic geography - economy - international cooperation- Bulgaria. 147713.

210. KROSS, E.:
Entwicklungsländer und Entwicklungsprobleme im Geographieunterricht - Versuch einer Positionsbestimmung
(Developing countries and developing processes in geography instruction - an attempt to define positions)
Geographie im Unterricht, 7, 1982, No. 6, pp. 209-217.
Lit. 74, 1 appendix, 1 photograph.

Teaching about the developing countries brings with it a number of didactical problems. This is a political topic and geography is not the only subject which acquaints pupils with these and related problems. Problems concerning the developing countries are taught in all classes and include problems of the life and underdevelopment of these countries, their structures, the world economy and economic theory. The author has found that pupils often do not understand a number of terms such as illiteracy, poverty, unemployment, hunger, disease. In the developing countries economic problems lead to a vicious circle. The author provides suggestions for various assignments concerning these countries. Humanitarianism, as well as solidarity require that we help the developing countries.

didactics of geography - geography instruction - regional geography + developing countries - socio-economic geography - learning notions + geography - FRG. 147713.

211. LAYRITZ, W.:
Die Zirkulation der Atmosphäre (Circulation in the atmosphere)
Geographie im Unterricht, 7, 1982, No. 9, pp. 337-339.
Lit. 2, 7 figs.

The author demonstrates how to explain to pupils the circulation which takes place in the Earth's atmosphere. He uses the well-known experiment with a candle and air circulation in a well heated room. He then explains the causes for the movement of air on Earth and the system of passing on thermal energy which is partially tranformed into kinetic energy. Only 2 % of the solar energy sent to Earth is changed into the kinetic energy of air currents in the atmosphere. Air currents are the outcome of the various intensity of solar radiation over the equator and the poles. The size of air pressure influences air movement as does gravity, friction when moving over the surface of the Earth and also the centrifugal power of the Earth's rotation. The author also deals with wind chains, equatorial low pressure troughs, subpolar high pressure ridges, polar eastern winds, western winds in the temperate zone, the north-eastern trade winds in the northern hemisphere and the south-eastern trade winds in the southern hemisphere.These notions are shown on pictures.

didactics of geography - geography instruction - physical geography - thematic unit - atmosphere - climate - teaching medium - geographical drawing - FRG. 147713.

212. LAYRITZ, W.:
Verkehr im städtischen Ballungsraum (Traffic in downtown areas)
Geographie im Unterricht, 7, 1982, No. 3, pp. 110-123,
9 maps, 1 picture table.

This topic is recommended for the lower classes of secondary school for teaching a 4 lessons unit. The topic includes problems of urban traffic, the planning of transportation networks when building or reconstructing towns and cities and urban mass transportation systems. The topic requires the reading and interpretation of maps and a study of relations between industrial, administrative and business centres and housing sections. Transportation should burden the town as little as possible (due to its noise, polluting exhalations, dust and vibrations). The system of highways is described; it makes living in the suburbs more attractive. Also the problem of private versus mass public transport is discussed.

didactics of geography - geography instruction - secondary school - settlement geography - thematic unit - transportation - group instruction - teaching medium - worksheet - FRG. 147713.

213. LAYTON,R.:
Hydrology in the School Grounds
Teaching Geography, 7, 1982, No. 4, pp. 154-158.
4 figs., 5 tabs.

The article cites several techniques and analysis methods related to the hydrology cycle which are suitable for geography instruction. First basic hydrological terms are explained concerning various types of precipitation, which fall either directly on the surface of the earth or through trees, as well as measurement methods, how various types of trees intercept the falling raindrops, etc. The author describes how to make a rain catching device and how it should be used throughout the whole year. 7 specific problems and assignments related to these problems are provided. The author also provides diagrams for studying various relations between precipitation and other factors.

didactics of geography - geography instruction - secondary school - hydrobiology - physical geography - learning notions - practical work + pupils - diagram - Great Britain. 147713.

214. LIMBIRD, A.:
Development of a Multi-experience Approach in Introductory Soil and Vegetation Geography Courses
Journal of Geography, 81, 1982, No. 3, pp. 101-105.

Often physical geography courses are not as effective for students as other parts of geography because there tend to be few practical examples which would capture the student's attention. The author therefore stresses the need for using visual and auditive methods of teaching which will increase the effectiveness of lectures. The author himself uses not only films and slides but also models to strengthen memory. This concerns especially topics concerning the quality of the soil, the capacity of the soil for utilization, its vegetation, colour, mineral structure, phytosynthesis process, the soil relief and the vegetation connected with a specific type of soil, etc. The author cites a case where 116 students were asked to assess the whole geography course on the basis of a questionnaire. The findings of this project provide interesting incentives for teachers teaching physical geography.

didactics of geography - geography instruction - physical geography - phytogeography - pedology - instruction methods - lectures - teaching media - films-slides - questionnairs - Great Britain. 147713.

215. MICHAL, P.:
K zákonitostiam priestorovej diferenciálnej pedosphery I. (On the laws governing the spatial differentiation of the pedosphere - part I.)
Přírodní vědy ve škole, 33, 1981-1982, No. 8, pp. 315-317. 2 figs., 1 tab.

The article explains the laws according to which soils are distributed throughout the world. Two basic and one transitory types of spatial laws concerning the differentiation of the Earth´s surface are explained. The basic laws include zonality which is caused specifically by the spatial horizontal and vertical differentiation of the climate and zonal laws as a consequence above all of hydrological, substrate and geomorphological factors. Among the transitory group of laws which are a consequence simultaneously of the climate and non-climate factors, the author cites provinciality and the vertical differentiation of the soil cover. Various types of vertical zonality are summed up in a table, as well as horizontal zones.

didactics of geography - geography instruction - physical geography - pedology - climate - soil types - Czechoslovakia. 147713.

216. MICHAL, P.:
K zákonitostiam priestorovej diferenciácie pedosféry - II. (On the laws governing the spatial differentiation of the pedosphere - Part II)
Přírodní vědy ve škole, 33, 1981-1982, No. 9, pp.348-351.
Lit. 17, 2 figs.

In the second part of the article the author describes the zonality of soils in piedmont plains, the provinciality of the soil cover and its vertical differentiation. In the concluding part of the article the author discusses azonality. Azonal types can be found in various soil zones, because in contrast to zonal types, they are not dependent upon the bio-climate, In a summary for both parts of the article the author provides a brief glossary of terms used by pedology, which includes 31 entries.

didactics of geography - geography instruction - physical geography - pedosphere - climate- soil types - terminology + glossary - Czechoslovakia.
147713.

217. NAJDENOVA, M. - IVANOVA, K.:
Metodicheska razrabotka na uroka na tema "Khimicheska promyshlenost na NRG" (Methodological outline for a lesson on the chemical industry in Bulgaria)
Obuchenieto po geografiya, 25, 1982, No. 5, pp. 12-17.
3 tabs.

Preparations for the lesson should begin several days in advance. The teacher should first himself become acquainted with the specific tasks and situation in the chemical industry and also prepare questions and clarify the objectives of the lesson.

The first part of the lesson deals with answers to previous assignments concerning the territorial allocation of the engineering industry with the aim of clarifying the importance of engineering for the development of other industries, including the chemical industry. A table with a survey of various types of chemical products produced serves to show the importance of this industry and its main customers. Another table shows the subdivision of this industry, its output, number of employees and production plans. The teacher should use a map of Bulgaria, a geographical atlas and slides showing some chemical enterprises. The final part of the lesson should be devoted to a discussion of the importance of the chemical industry where pupils can show what they have learnt on the basis of their own iniciative. The final conclusion should be that the chemical industry is one of the most important in the national economy since it is instrumental for technological progress in a number of other industries.

didactics of geography - geography instruction - secondary school - 10th class - socio-economic geography - thematic unit - Bulgaria. 147713.

218. NITSCHE, G. - ZEIGER, B.:
Bauplanung als Projekt in der 9. Klasse
(The planning of urban construction as a project for the 9th class)
Geographie im Unterricht, 7, 1982, No. 3, pp. 96-103.
Lit. 6, 4 figs., 4 worksheets.

The author suggests this project for use at state examinations; it concerns the plans for the construction of an urban area on the basis of a specific site in the vicinity of the school. The students should first become acquainted with existing plans, as well as with slides, maps, drawings and models connected with the building site. A total of 12 hours are assumed for the project. The town of Solingen serves the author as as example; it includes not only residential areas, but also sections with small family houses and agricultural activities, sections with shopping centres, restaurants, small industries, churches, cultural and social facilities, sports facilities, administrative units and some industry.

didactics of geography - geography instruction - socio-economic geography - settlement geography - written examination - town - teaching medium + geography - FRG. 147713.

219. PAVLOV, D.

Urok na tema "Khimicheskaya promishlenost" v osmi klas (A lesson on the chemical industry in the 8th class)

Obuchenieto po geografiya, 25, 1982, No. 2, pp. 38-44. 2 tabs.

In the 1980-1981 school year a model lesson with the presence of various guests was held in the 8th class on the topic of the chemical industry, to demonstrate the content of the new teaching syllabus. The following educational and teaching objectives were specifically cited: 1) to explain the term chemical industry and the implementation of interdisciplinary relations with the teaching subject chemistry, 2) to extend and supplement pupils knowledge concerning an economic and geographical characteristic of this industry, 3) to strengthen elements of polytechnical education and implement elements of regional geography,

4) to carry out education towards environmental control in relation to the development of this industry and the scientific and technological revolution. The article deals in detail with the methodological aspects of the lesson devoted to this topic. Tables made by the pupils concerning a survey of the raw materials the chemical industry uses are used to activate pupils.

didactics of geography - geography instruction - basic school - 8th class - socio-economic geography - chemical industry - interdisciplinary relations - polytechnical education - environmental conservation - Bulgaria.
147713.

220 PETER, A.:
Entwicklungsanstregungen in Sri Lanka. Exportierte Industrialisierung oder Intensivierung der Landwirtschaft ? Entwicklungspolitische Unterrichtseinheit für Abschlussklassen der Sekundarstufe I.
(Development strivings in Sri Lanka. Exported industrialization or the intensification of agriculture?
A teaching lesson on development policy in the final classes of secondary school)
Geographie im Unterricht, 7, 1982, No. 6, pp.239-249.
Lit. 25, 11 textual appendixes, 1 worksheet,
2 supplements

4 to 5 lessons are devoted to problems of developing countries in the geography course in the final class of secondary school. This article develops various concepts concerning the underdeveloped countries, on the basis of the example of Sri Lanka, and stresses social and economic, as well as geographical aspects. The changes from a socialist orientation towards a more

liberal one in this country are described. The various work materials supplied by the article provide various opportunities for pupils´ independent assignments. Sri Lanka strives to overcome its poverty and to provide for the basic needs of its inhabitants. The country is strongly dependent upon the export of farm products (tea, rubber, coconuts). The situation is aggrevated by population growth, a high density of settlements especially in the capital and nationality and religious differences among various components of the population. The per capita national product is very low (only 12 US dollars in 1973) and the country has very few mineral resource, no coal or petroleum, there is an acute energy shortage. The infrastructure, due to the island´s colonial heritage, is good. Sri Lanka is seeking its own concept of development which stresses the intensification of agriculture and the development of industry for export purposes. Its socialist model has not fulfilled expectations and so a more liberal model is now being tried.

didactics of geography - geography instruction - secondary school - thematic unit - geography + developing countries - regional geography - Sri Lanka - socio--economic geography - FRG. 147713.

221. POLLEX, W.:
Die Funktion politischer Hauptstädte (The function of political capital cities)
Geographie im Unterricht, 7, 1982, No. 5, pp. 194-199.
Lit. 20.

The article is a factual analysis of capital cities, not a methodological outline of a specific teaching lesson. First the history of capitals since ancient times is summed up: for Assyria, Babylon, Greece, Rome, Carthage, Genova, Venica, Lūbeck are mentioned. The capital city of a state may be of local importance, regional importance, national or supranational significance or even of global, world-wide importance. The political capital of a country is always politically important, since it fulfills an international function within the country. The author first discusses the German problem, the division of Berlin. Bonn as an old residential town had a population of 100 000 and now as the capital of the Federal Republic it has 800 000 inhabitants, where in 1975 over 58 500 persons were employed in various federal institutions. It has become the capital of a highly industrialized and urban society which has over 60 million inhabitants.

didactics of geography - geography instruction - settlement geography - cities - political geography - historical geography - FRG. 147713.

222. PULLINGER. H.:

Teaching About Air Masses and Lapse Rates

Teaching Geography, 7, 1982, No. 4, pp. 146-148, 6 figs.

Radio and TV programs concerning the weather and its forecasting use a special terminology which experts understand, but often listeners in general and especially school children do not. The author explains these terms and explains why they must be used. He explains precipitation, cyclones or lows, anticyclones or highs, cold waves, changes in the

202

weather, etc. The central theme of the article are air masses and their lapse rates, or changes in temperature depending on altitude. Simple diagrams help to understand this complex subject matter. The examples cited assume knowledge of physics and mathematics and are thus highly conductive to promoting interdisciplinary relations.

didactics of geography - geography instruction - physical geography - atmosphere - climatology - weather - interdisciplinary relations - Great Britain. 147755.

223. RAUCHFUSS, D.:
Kohle aus der Niederlausnitz. Ein Beispiel für die Behandlung der DDR im 10. Schuljahr (Coal from Lower Lusatia. An example for the geography course on the GDR in the 10th class.)
Geographie im Unterricht, 7, 1982, No. 4, pp. 129-137.
Lit. 32, 5 figs., 3 tabs.

In the geography course in the final class of lower secondary school in both German states - the Federal Republic and the German Democratic Republic - are compared. In this article the author suggests two topics for this section of the course: Brown Coal from Lower Lusatia and Settlements in Industrial Areas. The importance of brown coal for the GDR as the primary energy source for the country is explained, as well as the development of the town of Cottbus in connection with the development of strip mining, etc. On the basis of the example of the town of Cottbus the joint problems which arise from combining intensive mining and the development of a residential and administrative centre are discussed. The author analyses population migration in the Cottbus district, the density of the population in relation to agriculture and industry in the district, the size of other settlements in the district and its comparison to the districts of Halle and Leipzig. The contribution of the Cottbus district to gross energy and fuel production in the GDR is 28.6 %, while in the chemical industry 5.1 %, in food processing 4 % etc. The author stresses the success which the GDR has achieved in energy production.

didactics of geography - geography instruction - secondary school - socio-economic geography - thematic unit - coal production + GDR - FRG. 147713.

224. ROLLIK, H.G.:
Warum die deutschen Fischer entfernte Fanggründe aufsuchen müssen (Why German fishermen have to seek distant fishing sites)
Geographie im Unterricht, 7, 1982, No. 8, pp. 316-317.
Lit. 4, 2 transparencies for worksheets, 1 fig.

The author suggests this teaching topic for the 6th class geography course and provides an outline. He explains why German fishermen - seeking cod, herring or salmon - the most important sea fish used for food, must travel long distance to find them. Marine fish seek suitable places for laying eggs, which have a sufficient supply of food i.e. plankton. These are usually places where cool and warm currents meet. Currents which have an upward direction also bring minerals from the bottom of the sea to the surface layers of water, where large amounts of plankton then live. The food chain in the sea begins with plant plankton and ends with the valuable fish sought by man. The author provides an outline of this topic for use in school. He correctly places greatest stress on the problem of food chains in the sea and interdisciplinary relations between geography and biology.

didactics of geography - geography instruction - basic school - 6th class - socio-economic geography - thematic unit - marine fishing - interdisciplinary relations - food chains - FRG. 147713.

225. ROTHFUCHS, G.:
Das Klima beeinflusst den Menschen (The climate influences man)
Geographie im Unterricht, 7, 1982, No. 9, pp. 349-359.

The influence of the climate on man is comprehensive, it influences not only the environment, but also man´s health and all his activities. These facts are usually not sufficiently stressed in geography courses taught in school. Here the author demonstrates how this subject-matter can be included into various topics taught in the 5th to 9th classes of basic school. Also worksheets for various classes are provided, as well as supplements for pupils' independent work. The following topics are described in greater detail: mountain chalets, the climate and human health, the foehn wind, diseases which are connected with changes in the weather.

didactics of geography - geography instruction - basic school - 5th to 9th class - climate + man - worksheet - independent work + pupil - FRG. 147713.

226. ROYLE, S.A. - ANDERSON, T.J.:
Teaching Modern Historical Geography
Teaching Geography, 7, 1982, No. 3, pp. 129-133.
2 figs., 2 tabs.

The theory of a central site for both authors represents the basic approach to modern historical geography. By this term they have in mind the tendency of some settlements to concentrate the interest of surrounding settlements for some reason which is specific to it. This reason can be created by a decree of the authority, for instance the holding of markets, the sale and stocking of salt, etc. For practical reasons, to gain the attention of the largest number of persons, heralds would be sent to market towns to announce various orders or decisions. Later a permanent representative of the authority would be present and this in turn influenced the economic and political development of the town, until finally - and sometimes this could take a very long time - the town became the seat of authority, a district or region. The authors apply this theory to the British town of Leicester; historical facts are cited from various documents and maps on the basis of which we can observe the growth of the town and at the same time follow the disappearance of smaller settlements which gradually merged with the town.

didactics of geography - geography instruction - historical geopgrahy - settlement geography - Great Britain, 147713.

227. SCHMIDKE, K.D.:
Prozessabläufe bei der Genese des konvektiven Niederschlagstyps. Oder wie Old Shatterhand in der Wüste überlebte (The course of creating convection types of precipitation. Or how Old Shatterhand survived in the desert)
Geographie im Unterricht, 7, 1982, No. 9, pp. 375-379. Lit. 5, figs. 4.

The author demonstrates how to make use of the popular novels of Karel May about the wild west for geography teaching. This writer made use of his knowledge of geography which he was able to convey in the form of interesting stories, which are still highly motivating. The author cites the example of how in the Llano Estacado desert it is possible to provoke rainfall artificially. The physical explanation of how a rain cloud and subsequent rain are created when a cacti field is set on fire is given.

didactics of geography - geography instruction - physical geography - teaching medium - literature for children - interdisciplinary relations - FRG.
147713.

228. SCHMIDTKE, K.D.:
Vorzüge mediengesteuerter Strukturierung in Unterrichtsentwurf und Unterrichtsdurchführung. Beispiel Meersaltzgewinnung im Rhonedelte (The advantages of structuralization and the extended use of teaching media in the course of instruction. The example of salt extraction in the Rhône river delta)
Geographie im Unterricht, 7, 1982, No. 5, pp.185-194.
Lit. 5.

The author demonstrates how he deals with the didactical aspects of a complex topic - the extraction of salt in the Rhône river delta. He recommends the use of various types of teaching media and organizational forms. The topic begins with a survey of the importance and historical development of salt extraction and how this extraction is carried out in the province of Camargue, in Salin de Giraud in the South of France. The climate (with annual evaporation of 1420 mm and annual precipitation of 490 mm) is described, as well as the relief and natural conditions of the area.

The extraction process begins by taking water from the Mediterranean sea, of which 9/10th are evaporated. The water is then placed in special underground reservoirs so that the surface of the water is reduced and then the next year, salt is extracted and refined. 750 to 1500 tons of salt are produced per hectar of land.

didactics of geography - geography instruction - socio-economic geography - regional geography - France - extraction + raw material - salt - FRG. 147711.

229. SCHMIDT, A.:
Zur Didactic der Antartis (On the didactics of Antarctica)
Geographie im Unterricht, 7 1982, No. 7, pp. 257-269.
Lit. 30, 3 figs., 1 supplement.

The author shows 7 different approaches to acquainting pupils with Antarctica. The first 3 are for lower classes and stress especially the topography of the continent, on the basis of travellogues and various photographs of the landscape. 3 are for older pupils, where Antarctica is compared to the Arctic regions and a comparison of the problems and conflicts concerning both are discussed. For topographical studies an atlas or wall map is sufficient. The South Pole, magnetic pole and pole of cold are explained. 90 % of the ice found on Earth is in Antarctica, the South Pole is found at an altitude of 2800 meters, but the ice layer is 2810 meters high so that the pole itself is below sea level. The article also describes the history of Antarctica and the stories of various explorers. In conclusion the author describes the international aspects of Antarctica and the international agreements which exist in this area.

didactics of geography - geography instruction - physical geography - Antarctica - teaching media - atlas - historical geography - FRG. 147713.

230. SCHWEINGLER, H.:
Wetterkatastrophen in Europe (Weather catastrophes in Europe)
Geographie im Unterricht, 7, 1982, No. 9, pp. 362-370. Lit. 8, figs. 9.

The author recommends using news items about weather catastrophes in geography teaching. These include storms, floods, hail, ice covers on roads and especially any experiences which the pupils themselves may have in this area. In this context the objective is not only cognitive but also affective. All the news media are important sources of information, as well as regional material. Weather maps and information from the weather forecasting bureau can also make a contribution to the study of this topic.

didactics of geography - geography instruction - climatology - weather - meteorological station - cooperational forms - group instruction - FRG. 147713.

231. SIWULSKA, M.:
Konspekt lekcji w kl. IV na temat: Krasowa dolina Poradnika kolo Ojcowa (The outline of a lesson in the 4th class on the topic: The Pradnik karst valley in the vicinity of Ojcow)
Geografia w szkole, 35, 1982, No. 2, pp. 73-74.

In the first part of the lesson pupils become acquainted with the geology of karst areas which exist both on the surface or in subterreanian areas, often in the form of karst caves. The educational and teaching objective in this lesson is to teach pupils to use a tourist map and other materials. The author recommends the use of the following teaching media: maps, atlases, textbooks and a tourist map of the Ojcow national park. During the lesson pupils work in groups and a discussion is held. The lesson is described in detail.The author also suggests homework assignments where pupils write an essay about why the karst region of Ojcow is now threatened. The author suggests devoting two teaching lessons to this topic - one to surface karst and the second to subterreanian karst phenomena.

didactics of geography - geography instruction - basic school -- 4th class - physical geography - karst - teaching methods - use of map - teaching media - Poland. 147713.

232. SKOKAN, L.:
Rozmístěné sovětského hospodářství v 11. pětiletce
(The territorial allocation of the Soviet economy
in the 11th five-year plan)
Přírodní vědy ve škole, 33, 1981-1982, No. 3, pp.108-111.
2 tabs.

The 11th Soviet five-year plan assumes the following annual growth in output of important industrial products: electricity from 1295 to 1550-1600 billion kWh; petroleum from 603 to 620-645 million tons; natural gas from 435 billion m^3 to 600-640 billion m^3, coal from 716 to 770-800 million tons, rolled steel from 103 to 117-120 million tons, artificial fertilizers from 104 to 155 million tons, synthetic resins and plastics from 3440 to 6000-6250 thousand tons, fabrics of all kinds from 10700 to 12700 million m^2. In agriculture cereal production is to increase annually from 207 million tons (the average for the period 1976-1980) to 238-243 million tons annually in the period 1981-1985. Sugar beet production will grow from 88.5 to 100-103 million tons, raw cotton from 8.9 to 9.2-9.3 million tons, meat from 14.8 to 17.0-17.5 million tons, milk from 92,6 to 97-99 million tons and eggs from 63.1 to 72 billion. The author then discusses the development of the USSR according to various economic regions.

didactics of geography - geography instruction - general education - secondary school - economic geography - regional geography - USSR - 147713.

233. STAHN, L.:
Flurbereinigung: Problem und Folgen im Geographieunterricht der Sekundarstufe I. (The integration of the land: its problems and consequences from the point of view of geography instruction)
Geographie im Unterricht, 7, 1982, No. 5, pp. 170-175.
Lit. 12, 3 outlines, 4 tabs., 5 figs.

The author here deals with a very timely topic: the problems and consequences of integrating land in the wine growing region of Tuniberg, in the southern part of Baden, in the immediate vicinity of Keiserstuhl. Between 1951 and 1974 the vineyards have been modernized from the point of view of the varieties grown and also some of the land has been integrated into larger units. This has had mostly positive but also some negative consequences. The state has contributed 16.5 million DM to this process of modernization and private wine growers invested another

10 million DM. Bacause of the changes taking place, the area had to overcome 2 or 3 years practically without any crops, but in the next 10 years these investment will start to bring in profits. This topic can be taught as problem teaching. In the majority of cases integration has had a positive effect. Among the negative effects are the biological decrease in the variety of the landscape, the possibility of soil erosion on newly planted slopes and the danger of frost bite on larger terraces. The new arrangement greatly simplifies cultivation and thus decreases the costs of wine production.

didactics of geography - geography instruction - secondary school - socio-economic geography - soil - soil erosion - FRG. 147713.

234. SUKMANOV, K.:
Stara Zagora
Obuchenieto po geografiya, 25, 1982, No. 1, pp.41-46.

Stara Zagora is one of the oldest and historically most important towns in Bulgaria. The author briefly desdribes the town and explains some historical events connected with it. He also mentions its cultural development and contribution and its modern socialist economy and the social stratification of its inhabitants.

didactics of geography - geography instruction - settlement geography - town-historical geography - Bulgaria - 147713.

235. VOLKMANN, H.:

Das Thema "Begrenzheit der Ressourcen" in der Sekundarstufe I. (The topic "The limited nature of resources" in the lower classes of secondary school) Geographie im Unterricht, 7, 1982, No. 1, pp. 26-34. Lit. 35, 4 figs., 1 survey.

School geography has always considered natural resources to be inequally distributed throughout the world, but essentially usable at any time and always existing. This article demonstrates the limited nature of natural resources in some areas and their limited nature from an economic point of view. At present the limited amount of raw materials and their exhaustible quantities are becoming clear. This basic conceptual problem should be stressed in school work. The basic terms in this context are renewable and non--renewable resources and depletable and non-depletable resources. The author cites interesting data from the history of mankind as far as human consumption of fuel is concerned. Man as a collector of fruits and herbs required 2000 kcal daily, man as a hunter 5000 kcal, as a peasant 12000 kcal, and contemporary man living in an industrial society uses an average of 230 000 kcal daily. The extent to which natural resources are depleted depends upon the technological situation of society, the intensity of their utilisation depends upon the value scales of a specific society, upon the importance attached to conservation of the environment and the amount of depletable resources available. The limited nature of natural resources has been a constant source of international conflicts. Ways should be sought to deal with these problems through international cooperation.

didactics of geography - geography instruction - secondary school - environmental conservation - natural resources - FRG. 147713.

236. VOTÍPKA, J.:
Minerální prameny a naše nejmladší horniny
(Mineral springs and our youngest rock formations)
Přírodní vědy ve škole, 33, 1981-1982, No. 8, pp.318-319.
Lit. 2, 1 fig.

The article explains the creation of mineral springs, describes their main types and their regional allocation throughout Czechoslovakia. Attention is devoted to the creation of our youngest rock formation - travertine, which is the outcome of precipitation from mineral springs. The article is written for geography teachers, as an aid for preparing class work. Surface water penetrates the uppermost layers of the Earth's crust and comes into contact with soluble lake and marine sediments and is enriched with sodium chloride or sodium hydrogen sulphate , this mineral water then either has a salty or bitter taste. In other cases the water encounters gases rising from magma or a deep fissure; these are usually carbon dioxide or hydrogen sulphide or other gases (methane or water vapours). This subterannian activated water is much more aggressive and dissolves with varying intensity various rocks with which it comes into contact. When the gases are still hot, then the water is also heated and increases its soluble strength. The content of the dissolved substance is cited in cations and anions; among the cations, sodium is most frequently encountered, as well as lithium, ammonium, calcium, magnesium, iron; among the anions, chloride, sulphur compounds and carbonates are most frequently encountered. The author then briefly describes the most important mineral waters found in Czechoslovakia, as well as travertines and aragonites which are found in this country.

didactics of geography - geography instruction - physical geography - waters - mineral springs - Czechoslovakia. 147713.

237. VOTÍPKA, J.:
Přírodní pásma SSSR a jejich hospodářské využití
(Natural zones in the USSR and their economic utilization)
Přírodní vědy ve škole, 33, 1981-1982, No. 3, pp.112-115.
15 photographs.

The natural zones found in the USSR gradually change from north to south and are characterised by different climate, altitude, type of soil, flora and fauna and the relief. With the exception of the tropics, all basic types of zones are represented. The author describes individual zones beginning with the arctic zone, the subarctic zone with tundra, forest-tundra, temperate zone with forests, with the taiga, with mixed forests and deciduous forests, forest-steppe and steppe, semi-desert and desert, the subtropical zone with wet sub-tropics, semi-arid subtropics and arid sub-tropics. Each of these are characterised in detail, including their climate, flora and fauna and economic uses.

didactics of geography - geography instruction, physical geography + USSR - climate - soil - flora - fauna - landscape type - Czechoslovakia. 147713.

238. VOTÍPKA, J.:
Za krásami krasu - I. (The beauties of a karst region - part I.)
Přírodní vědy ve škole, 33, 1981-1982, No. 9, pp. 352-354. 4 figs.

The author here provides material for extending the basic subject-matter taught in the 5th class geography course with a description of karst phenomena. Since pupils often encounter them and are thus curious, the article in an easily understood manner explains the course of karst processes which lead to the creation of a karst region. It also provides a basic classification of these phenomena. The first section deals with Czechoslovak karst regions and with some basic terms used to describe them, such as potholes, sinkholes, terra rosa, polje, grike and others.The article is for teachers.

didactics of geography - geography instruction - basic school - 5th class - thematic unit - karst - learning notions - Czechoslovakia. 147713.

239. VOTÍPKA, J.:
Za krásami krasu - II. (The beauties of a karst regions - part II.)
Přírodní vědy ve škole, 33, 1981-1982, No. 10, pp. 387-388. Lit. 5, 1 fig., 2 photographs.

The Punkva cave and its karst decorations was discovered by K.Absolon and J. Ježek, members of the Brno Speleological Club, in 1909. The author describes how a karst cave is created, with its stream channels, lapies, clints and grikes, as well as bridges, underground rivers, potholes and sinkholes. He also explains the difference between stalagmites (which project upward and are full) and stalactites, which project downward and have channales inside them. The author also provides other interesting information about karst caves and how they were created.The article is addressed to teachers preparing teaching lessons or excursions on this subject.

didactics of geography - geography instruction -basic school - 5th class - thematic unit - karst - basic notions - excursion - Czechoslovakia. 147717.

240. VOTÍPKA, J.:
Zvětrávání hornin a relief (The weathering of rocks and the relief)
Přírodní vědy ve škole, 33, 1981-1982, No. 7, pp.274-277.
Lit. 3., 4 figs.

This article is written for geography teachers and explains the process of rock weathering. It thus extends the subject-matter taught in the 5th class of basic school. First the characteristics of basic types of weathering of rocks are described; the author then cites a number of examples from Czechoslovakia. The creation of soil is described, mechanical and chemical weathering, the weathering of igneous rocks, granites, basalt and greenstone, as well as the weathering of sediments, sandstones, loams, slates and conglomerates. Also the difference between primary and secondary soil is explained. The article is very clearly written and can thus be given also to pupils for reading.

didactics of geography - geography instruction - basic school - 5th class - physical geography - weathering + rocks - soil - Czechoslovakia. 147713.

241. WAGNER, E.E.:
Der Weserdurchbruch bei Minden, Porta Westfalica. Ein Unterrichtspraktisches Beispiel für Senkrechtluftbild- und Karteninterpretation in der Orientierungsstufe
(The break through of the river Weser at Minden. Porta Westfalica. A practical teaching example for the use of perpendicular aerial photographs and map interpretation in secondary school)
Geographie im Unterricht, 7, 1982, No. 10, pp. 381-385. Lit. 12. 3 figs.

Geography instruction becomes more interesting and effective when slides showing aerial photographs are used. On the basis of specific examples the author describes a 3 lesson teaching unit, where even teachers who are otherwise sceptical towards innovations will appreciate the value of these new teaching aids. But in order to correctly use aerial photographs or photographs made by satellites it is necessary at the same time to use maps. Here the author recommends the use of a topographical map with a scale of 1 : 25 000.

didactics of geography - geography instruction - secondary school - hydrogeography - teaching medium - aerial photography - satelite photography - FRG.
147713.

242. WILLIAMSON. P.:
Practical Plant Geography for A-Level: Three Projects
Teaching Geography, 8, 1982, No. 2, pp. 56-58.
7 figs.

In spite of the fact that phytogeography is an important component of general geography it has been neglected by the majority of textbooks. The author here outlines three projects to study vegetation on the northern shore of Lake Windermeare in Northern England, the vegetation on the hills of Ambleside and a structural survey of the plants found in Skelgyl Forest south of Ambleside. A section of vegetation is divided into smaller sections so that every 10 meters a square of 25 cm x 25 cm is described in detail. Data for a series of 20 such small patches are then summed up into a diagram. In forests a somewhat different technique is used: The author provides detailed instructions for this type of field work, which is attractive for pupils and also highly effective.

didactics of geography - geography instruction - secondary school - phytogeography - organisational form -field work - Great Britain. 147713.

243. WROZ, W.:
Altstadtsanierung in Münden. Eine Unterrichtseinheit für Abschlussklassen der Sekundarstufe I. (The reconstruction of the old town in Münden. A thematic unit for the final class of lower level of secondary school) Geographie im Unterricht, 7, 1982, No. 3, pp. 82-90. Lit. 12, 1 photo, 10 tabs., 3 maps of town.

In this thematic unit the problem of the reconstruction of old towns is dealt with, on the basis of the example of the town of Münden, which has a very old central area, formed mostly of old houses belonging to artisans. The reconstruction of the town is here understood in the sense of modernisation and the conservation and restoration of historical monuments, while at the same time solving various social and societal problems. The most important part of teaching this thematic unit is an excursion combined with making maps of the downtown area. In the FRG extensive work of this type has been going on since the issuing of a new law on construction in 1971. In 1975 a total of 380 towns or villages were undertaking this type of reconstruction. Münden is well suited to serve as a model of this type of activity for school geography instruction. The town is 800 years old and is one of the most beautiful in the Federal Republic. The thematic unit is planned for a total of 6 teaching lessons. Pupils use tables which indicate the number of residential houses in 1970, the shortage of living space, the population and its age structure in the area to be reconstructed, who the owners of individual buildings are, the share of guest workers, financial restitution to those damaged by the project, the restoration of building facades, the use of artisan work. A map of the town should also be used by the pupils.

didactics of geography - geography instruction - secondary school - settlement geography - thematic unit - town - FRG. 147713.

244. WROZ, W.:
Die Verschmutzungen der Elbe und ihre Auswirkungen auf den Unterelberaum. Zum Thema Umweltgefährdung und Umweltschutz für Abschlußklassen der Sekundarstufe I.
(The pollution of the Elbe river and its influence on the down-stream section. A topic on the threatened environment and the required environmental conservation measures for teaching in the lower classes of secondary school)
Geographie im Unterricht, 7, 1982, No. 12, pp.476-487. Lit. 40. 1 tab., 2 figs., 6 transparencies.

This thematic unit is planned by the author for 6 teaching lessons and concerns the causes of pollution of the down-stream sections of the Elbe river and measures taken against this pollution and for cleaning up this section of the river. The increasing pollution of the river is especially evident in densly populated and industrial areas. The majority of the rivers in these areas are threatened in their basic biological functions. Many of them are permanently poisoned and some have already become sewage disposal canals. The Elbe is the most important river in central Europe where its catchment area measures 144 000 km^2, 35 % of its stream is in Czechoslovakia, 49 % in the German Democratic Republic and only 16 % in the FRG. The total length of its stream is 1163 km. This teaching project concerns only the 160 km of the down-stream section. The cause of the pollution are substances which bind oxygen (organic compounds, carbohydrates, ammonia) which come into the river from the insufficiently treated waste waters of various communities, poisonous heavy metals (especially mercury and cadmium), and also the waste waters from the GDR and the large industrial plants on the down-stream section of the Elbe, as well as cooling waters from power plants and nuclear power plants. The lack of oxygen in the water causes the killing of fish; fish polluted by mercury cannot be sold (for instance the Elbe eel), the sea in the mud flats on the FRG coast is threatened and poisonous substances are preventing the self-cleansing capacity of the Elbe to function properly. Producing drinking water for this area is becoming increasingly difficult and costly. The following measures could contribute to cleaning up the river: the building of large-scale water-treatment plants, enforcing the law on water conservation more strictly, making water inspection more strict, drawing up plans for the economic activity and conservation of the down-stream section of the Elbe, and improving water treatment by individual plants and communities. Plants which re-cycle their own water should receive various advantages and government support. Also international action should be taken in cooperation with the German Democratic Republic and Czechoslovakia in this area.

didactics of geography - geography instruction - hydrology-environmental conservation - water pollution - FRG. 147713.

245. ZLATKOVA, M.:
Kak provedokh uroka na tema "Mashinostroenie" v osmi klas
(How to teach a lesson on "Machine production" in the 8th class)
Obuchenieto po geografiya, 25, 1982, No. 4, pp. 24-28.
2 tabs.

The economic geography course acquaints pupils with a number of important problems concerning the manufacturing industries, their structure, most important raw materials, assortment of products, various types of enterprises, their territorial allocation, etc. Before teaching this topic the author first formulates its objectives:
1) learning about the importance of this branch of the economy as the basis for other industries, 2) an indication of the specific aspects of the development of this branch and its allocation from an international point of view, 3) learning about various industries on the basis of diagrams on the blackboard. To correctly understand the importance of machine production the pupils analyse diagrams on the blackboard which indicate the relation between this branch and other branches.

A map of the world can be used to indicate how this branch of industry is represented in various countries and its historical development in the socialist countries.

didactics of geography - geography instruction - basic school - 8th class - thematic unit - geography of the machine producing industry - Bulgaria. 147713.

246. BRAUN, A.:
Fremdenverkehrsplanung und Entwicklung im Spannungsfeld touristischen, ökologischen und ökonomischen Interessen (The planning of foreign tourism and its development from the point of view of tourist, ecological and economical interests)
Geographie im Unterricht, 7, 1982, No. 2, pp. 58-68.
6 figs., 7 appendixes, 4 tabs.

Within the framework of the topic "Leisure time and its use" the author discusses the Atlantis project on the island of Sylt, which is suitable as a project for pupils´ assignments or as a topic for problem teaching.The Atlantis project is to be a high rise building which would house a hotel, department store and the management of the resort. The building of this house would solve the problem of insufficient facilities for foreign tourists on the island. The appendixes contain various factual background material on this problem. The assignment given to pupils asks them to plan the reconstruction of this tourist centre and resort while taking into account the interests of the local people, who are afraid of increased noise and other negative aspects of increased tourism.

didactics of geography - geography instruction, secondary school - thematic unit - socio-economic geography - tourism - recreation -FRG. 147713.

13.1 Verification of the outcome of geography instruction

247. FARKAŠ, C.:
Skúsenosti s experimentálneho vyučovania zemepisu na gymnáziu (Experiences with the experimental teaching of geography in general education secondary schools)
Přírodní vědy ve škole, 33, 1981-1982, No. 1, pp. 38-39.

The author acquaints readers with the problems he encounters in the course of geography teaching in experimental classes of a general education secondary school. The new geography teaching syllabus places greater stress on the political importance of geography and modern methods of teaching, as well as more attention to general and economic geography, landscape theory and environmental conservation. In the 1st class, 3 lessons a week and in the 2nd class two lessons a week should be devoted to geography and in the 4th class a two-lesson weekly seminar is held (for part of the pupils). The author stresses the strivings of the textbook authors to extend the societal problems dealt with in geography. He however also criticises some aspects of the new syllabus: insufficient linkage to the geography syllabus for basic schools, too much subject-matter and insufficnetly adhering to the principle of adequate subject-matter in relation to the age of the pupils. Pupils of the 1st class are now a year younger than several years ago and the first part of the geography syllabus which deals with physical geography is too difficult for them.

didactics of geography - geography instruction - general education secondary school -experimental teaching - teaching syllabus - criticism - Czechoslovakia. 147713.

248. SCHÖPKE, H.:

Die Motivationskraft der Einstiegsphase. (The motivation force of the early stage of instruction)
Geographie im Unterricht, 7, 1982, No. 10, pp. 385-393.

The author informs readers about 9 teaching lessons devoted to the following topics: The destruction and conservation of the soil; A fire in a pine forest; The children of guest (foreign) workers - children without a future ?; The protest movement of Indians in Peru over the building of an airport; People on the fringes of society; Intra-urban mobility; Tabi Egbe does not want to be a farmer; The site of the crime - The Rhine river. On the basis of an analysis of these lessons the author stresses the importance of motivation and the increase in the effectiveness of instruction when problem teaching is used. Specifically when the subject--matter deals with problems facing society and pupils are able to identify with the problems being taught, their motivation for learning, as well as achieving good results is improved. The author especially stresses the introductory part of the lesson, which he calls the early stage of instruction, which is decisive from the point of view of motivation.

didactics of geography - geography instruction - motivation - problem teaching - study + effectiveness.
FRG. 147713.

13.2 Assessing the outcome of geography instruction

249. **FAHN, H.J.:**
Formen und Probleme der mündlichen Leistungsmessung in Geographieunterricht (The forms and problems connected with assessing oral answers in geography instruction)
Geographie im Unterricht, 7, 1982, No. 4, pp.137-142.
Lit. 8. 6 figs.

While a large number of criteria exist for marking pupil´s performance in written tests and examinations in geography, very few exist as far as the oral verification of their knowledge and skills are concerned. On the basis of a study project carried out with 6000 pupils in Bavarian schools in 1980 the author comes to the conclusion that the majority of pupils prefer oral to written examinations in geography. But teachers usually dislike oral examinations, among others because of the difficulty in assessing performance. Another problem with oral examinations is the fact that they take up much more time. The form of the question is very important and whether or not the pupil understood it correstly. The author suggests a number of criteria to facilitate the marking of oral answers.

didactics of geography - geography instruction - oral examinations - verification + knowledge - study project - FRG. 147715.

13.5 Geography examinations

250. WRONA, J.:
Najczestsze błedy z geografii na egzaminach wstepnych na akademie ekonomiczna w Krakowie (The most frequently made errors in geography during entrance examinations to the Economics Faculty in Krakow)
Geografia w szkole, 35, 1982, No. 5, pp. 239-242.

Those applying to study at the Economics Faculty in Krakow among others also sit for a written and oral examination in geography. The author describes the 10 most frequently made errors, which are the outcome of insufficient knowledge gained in secondary school. Pupils have difficulties with the localisation of places on a map, do not use correct geographical terminology, do not know how to spell foreign names, mix up similarly sounding names - for instance Lubin and Lublin, are unable to provide precise definitions, they attempt to cover up gaps in knowledge by citing unimportant facts, they have a tendency to become poetic, are unable to bring various facts up to date, they have difficulties in understanding map scales and determining distances according to map readings, etc.

didactics of geography - geography instruction - school entrance examinations - economics - mistaken + analysis - Poland. 147713.

14. The geography teacher

251. CHALASHKONOVA, M.:
Kak rabotat s basovite uchiteli po geografiya
(How to work with geography teachers from rural schools)
Obuchenieto po geografiya, 25, 1982, No. 2, pp. 20-25.
1 tab.

The author describes the organisation of courses for rural teachers of geography for the purpose of improving their qualification. These courses are organised by methodology supervisors who also organise practical work, such as for instance learning to measure the flow-through of a river, etc. The syllabus of the course was created on the basis of a critical analysis of the work of rural schools in the 7th class.

didactics of geography - geography instruction - geography teacher - further education - practical work - hydrology - Bulgaria. 147705.

252. GAYTANDZHIEVA, R.:
Otnosno opitnata i issledovatelskaya rabota na uchitelite po geografiya (Experimental and research work done by geography teachers)
Obuchenieto po geographiya, 25, 1982, No. 2, pp. 7-15.

Experimental and research work by geography teachers has been introduced as a measure aimed at improving and increasing their qualification as teachers and towards achieving dialectical unity between theory and practice. The article cites by name those teachers who have been active in this area. The author describes various methodological aspects of this work and its necessary prerequisites.

didactics of geography - geography instruction - teacher + geography - research activities - Bulgaria. 147705.

14.2 Teacher training in regular, in-service and post-graduate study at pedagogical and natural science faculties

253. FRISNYÁK, S. - BALOGH, B.A.:
Az általános iskolai fōldrajztanárképzés tartalmi és mōdszertani korszerūsitése (The modernisation of the content and methodology of training geography teachers for general education secondary schools)
Fōldrajztanitás, 25, 1982, No. 2, pp. 33-39.

The author begins by stressing that the basic objectives of training geography teachers have not changed. They should acquire a modern geographical, pedagogical and Marx-Leninist ideological education which they will be capable of practically implementing; be capable of further self-education as well as the comprehensive development of their personalities. The article describes the curriculum for teacher training in geography in various years and the examinations for which candidates studying for a degree must sit. The article also discusses in-service training, which takes 5 years in order to receive a degree.

didactics of geography - geography instruction - teacher + geography - general education secondary school - education + teacher - Hungary. 147705.

14.6 Pedagogical readings

254. LAZAROV, O.:
Problemite na obuchenieto po geografiya na desetite natsionalni pedagogicheski cheteniya (Problems of geography instruction at the 10th national pedagogical readings)

Obuchenieto po geografiya, 25, 1982, No. 1, pp. 1-7.

The 10th jubilee pedagogical readings took place in a year which was highly significant for the Bulgarian people. In that year the 12th Congress of the Bulgarian Communist Party was held and the country celebrated the 90th anniversary of the founding of the Bulgarian Communist Party and the 25th anniversary of the historical April Plenary Session of the Central Committee in 1956. Besides this 20 years have elapsed since comrade Todor Zhivkov became the head of the Bulgarian state. The last 4 years have represented an unprecedented flourishing of pedagogical readings. A great deal of attention and endeavours have been devoted to geography as a teaching subject. A total of 14 readings were accepted to the national round of the readings. Their subject-matter can be divided into 4 groups:1) the comprehensive development of the pupil in geography instruction, 2) communist education in geography instruction, 3) the present organization and subject-matter of educational and teaching work in geography and 4) the effectiveness of various teaching techniques and technologies in geography instruction. The author briefly describes all the pedagogical readings in the final round and in conclusion positively assesses the work of the geography section at the 10th pedagogical readings.

didactics of geography - geography instruction - pedagogical readings - Bulgaria. 147705.

14.7 Geographical meetings, conferences, specialised commissions, scientific institutes and scientific societies

255. BRABEC, F.:
Úlohy školskej komisie slovenskej geografickej spoločnosti (The tasks of the education commission of the Slovak Geographical Society)
Přírodní vědy ve škole, 33, 1981-1982, No. 5, p. 198.

Secondary school geography teachers have made and continue to make an important contribution to the activities of the Czech and the Slovak Geographical Societies. These societies also include the staff of the relevant scientific institutes of the Czechoslovak and Slovak Academies of Science. In the past the activities of the society were concentrated mainly on the most important problems of school geography, on various projects and creating or assuring the material prerequisites of instruction. At present the members of the education commission participate in organising lectures for geography teachers, contribute to the production of various teaching aids, organise annual meetings of geography teachers and the writing and editing of various materials for geography teachers in basic and secondary schools.

didactics of geography - geography instruction - Czechoslovak Geographical Society of the Czechoslovak Academy of Sciences + education commission - Czechoslovakia. 147723.

256. HLBOČANOVÁ, B.:
Úspešný metodický deň (A successful seminar devoted to methodology)
Přírodní vědy ve škole, 33, 1981-1982, No. 8, p.319.

On November 24th 1981 all the geography teachers from the district of Žilina met at the school in Rájecké Teplice for a district seminar on methodology. In the first part of the seminar participants heard a lecture on a trip around the world (by Dr. Kolo from the Institute of Experimental Pedagogics of the Slovak Academy of Sciences), in the second part of the program all participants visited a geography lesson held in the 5th class of a basic school in Žilina, which was later critically assessed.

didactics of geography - geography instruction - district pedagogical committee -methodological association - Czechoslovakia. 147705.

257. KAFEL, K.:
Konferencja nauczycieli metodyków geografii w Piotrkowie Trybunalskim (3-5 grudnia 1981) (A conference of geography teachers, specialists in methodology at Piotrkowie Trybunalski on December 3rd to 5th, 1981)
Geografia w szkole, 35, 1982, No. 2, p. 95.

On December 3rd to 5th 1981 the Institute for Teacher Training in Piotrkowie Trybunalski organised a national conference on the didactics of geography;

participants learnt about preparations for the implementation of a new teaching syllabus for geography for the 5th class of basic school beginning with the school year 1982-1983. Also new textbooks, atlases, various teaching media, workbooks and statistical tables, methodological handbooks and didactical literature were the subject of discussion. The quality and tasks of the journal Geographia w szkole were also discussed.

didactics of geography - geography instruction - conference - methodology + geography - teaching syllabus - basic school - 5th class - Poland. 147723

258. KRADRÁČOVÁ, V. - MICHAELI, E.:
VIII. sjezd slovenskej geografickej společnosti
(The 8th Congress of the Slovak Geographical Society)
Přírodní vědy ve škole, 33, 1981-1982, No. 9, p. 359.

The 8th Congress of the Slovak Geographical Society will be held on July 5th do 9th 1982 in Prešov; its main theme will be Geography and the Environment. The Congress will have four sections: school geography, the geography of synthesis and the environment, physical geography and economic geography.

didactics of geography - geography instruction - geographical society - Congress + program - 1982 - Czechoslovakia. 147723.

259. VÁHALA, V.:

30 let ČSAV. K výročí založení ČSAV a vzniku jejích prvních samostatných pracovišť (30 years of the Czechoslovak Academy of Sciences. On the anniversary of the founding of its first independent institutes) Lidé a země, 31, 1982, No. 14, pp. 519-520.

On November 12th, 1982 the anniversary of the founding of the Czechoslovak Academy of Sciences was celebrated by the public in Czechoslovakia. By merging the Study Centre for Cartography in Prague with the State Map Collection, the Study Centre for Geomorphology in Brno and the Study Centre for Historical Geography in Prague, on January 1st 1963 the Geographical Institute of the Czechoslovak Academy of Science was founded in Brno. The Institute contributed to the preparation and creation of a Czechoslovak Military Atlas and an Atlas of the Czechoslovak Socialist Republic; it has also since then carried out important research in geomorphology, the division of the Czech Socialist Republic into geographical regions, a study of soil erosion and the environment, etc. At present the Institute participates in research on ecological geography, the sociologisation of geography, the automated creation of thematic maps and the use of computers, as well as a long-term study of the Earth for the purpose of landscape analysis.

didactics of geography - geography instruction - Czechoslovak Academy of Sciences. 147753.

260. VEKILSKA, P.:
Chetvrti natsionalen kongres na geografite v Blgariya
(The fourth national geography congress in Bulgaria)
Obuchenieto po geografiya, 25, 1982, No. 2, pp. 1-6.

The congress met on October 5th to 7th 1981 in Varna in the Frederic Joliot Curie International House of Science. It demonstrated that geography as a science deals with important problems which are closely connected with the life and socio-economic development of the country. Much attention was devoted to environmental conservation and the rational utilisation of natural resources. Participants first listened to a paper called "Problems of geography instruction in the light of the 12th Congress of the Communist Party of Bulgaria". Other papers analysed the positive and negative aspects of new textbooks, the work of various teams of authors, various methodological aspects of the geography teaching syllabus, the teaching of basic geographical notions, etc. In the final part of the discussion various organisational problems were discussed, as well as the system of increasing the qualification of geography teachers, etc. In conclusion an important resolution was accepted which concerns the work of the Bulgarian Geographical Society and its work among teachers.

didactics of geography - geography instruction - congress - socio-economic geography - environmental conservation - Bulgaria. 147705.

261. ŘÍHA, J.:
Zeměpisné sdružení (The Geography Association)
Lidé a země, 31, 1982, No. 9, p. 394.

The Geographical Association is the name of a new geographical society which was founded in 1981 as a section of the B. Václavek Club for Education and Science in Brno. During less than a year it has organised a number of meetings for members with lectures and panel discussions about travel, with slides and other geographical material. Also field work and excursions have been organised by the Association.

geography -leisure-time activities - society + geography - Czechoslovakia. 147753.

262. HÄUFLER, V.:
Sto let od narození akademika V. Dvorského (Academician V. Dvorsky was born one hundred years ago)
Lidé a zemĕ, 31, 1982, No. 9, pp. 405.
1 photograph.

Academician V. Dvorský was a geographer and the first university professer of economic geography in Czechoslovakia. He was born in 1882 and died in 1960. He travelled extensively in the Alps and Balkans. In 1929 he had a stroke and ceased to teach or be publicly active. He was the founder of Czechoslovak economic geography.

geography - geographers - anniversary - Czechoslovakia. 147753.

263. HOLEČEK, M.:
Theatrum Mundi na Jemništi (Theatrum Mundi at Jemniště)
Lidé a zemĕ, 31, 1982, No. 8, p. 382.

The central Bohemian Art Gallery in Prague organised in 1981 an exhibition of old cartographic works fwom the Netherlands called Theatrum Mindi. It was organised by the Centre for Historical Monuments and Nature Conservation for the Central Bohemian Region and specifically by Dr. K. Friedl. The exhibits came mostly from the collections of the Wallenstein and Lobkovic families found at the palaces at Mnichovo Hradiště and Mělník and included maps, as well as scenic views from the workshops of Netherlands cartographers from the 17th century. Some of this material has now been used to install a permanent exhibition at the Baroque palace in the town of Jemniště, 10 km southeast of Benešov.

geography - geographical society - exhibition - Czechoslovakia. 147753.

14.9 Outstanding geography teachers, outstanding geographers, anniversaries, awards, deaths

264. BÍLEK, J.:
Malíř a cestovatel (A painter and traveller)

This article was written at the occasion of the 70 birthday of Artist of Merit Karel Stehlík (born on May 21st, 1912 at Milevsko). This painter of southern Bohemia visited 26 countries in Europe and other continents. He was a frequent visitor to the USSR. He worked and taught in Milevsko throughout his life.

geography - painting + travel - Czechoslovakia. 147753

265. HERINK, J.:
Vzpomínka na dr. Václava Vojtěcha (In memory of dr. Václav Vojtěch)
Lidé a země, 31, 1982, No. 8, pp. 379-380.

Dr. Václav Vojtěch was a member of Byrd´s Antarctic expedition in 1928-1930, He was the first Czech to set foot on Antarctica. In 1982, 50 years elapsed since his tragic death. He was drowned in the Elbe river. For his participation in Byrd´s expedition he recieved a Gold Medal from the Congress of the USA and a letter of thanks from Admiral Byrd.

Geographer - anniversary - Václav Vojtěch - Czechoslovakia. 147753

266. JANKA, O.:
Zapomenutý český malíř a cestovatel (A forgotten Czech painter and traveller)
Lidé a země, 31, 1982, No. 6, pp. 281-282.
1 photo

Bohuslav Kroupa is the name of a forgotten Czech painter who studied lanscape painting at the Prague Academy of Art. He painted in Bohemia and Moravia, in Germany, Switzerland, Italy and Belgium. Since 1862 he lived in Paris. He also painted in England, Scotland and Ireland. In 1870 he became an illustrator in Montreal in Canada and also worked in the USA and on the Hawaiian islands, in Panama, Cuba and Mexico. In 1878 he returned to Prague. In 1890 his biography was published in Britain. He definitively returned to Prague in 1905 and died there in 1912.

geography - painting + travel - Bohuslav Kroupa - Czechoslovakia. 147753

267. KANDERTOVÁ, O.:

Alberto Vojtěch Frič

Lidé a země, 31, 1982, No. 8, pp. 354-358.
6 photos.

Alberto Vojtěch Frič (1882-1944) was a Czech botanist, amateur ethnograph and traveller who studied nature, languages and the culture of the Indians in Brasil and Paraguay. His main work was concerned with the Indians of South America. He was also known as a collector of cacti and zoological objects. He left for South America in 1900 where he studied the Pilago and Borero tribes and mapped the river Pilcomayo, thus openning a direct transportation route between Paraguay and Bolivia.

geographer - Alberto Vojtěch Frič - anniversary - Czechoslovakia. 147753.

268. MAZÁK, V.:

Nejslavnější pasažér lodi Beagle (The most famous passager on the ship Beagle)

Lidé a země, 31, 1982, No. 4, pp. 152-155.
2 figs., 1 map.

The objective of the expedition of H.M.S. Beagle to Tierra del Fuego and the Chiliean costline, as well as Peru and several islands in the Pacific Ocean was mapping. The Beagle set sail on December 27th 1831. The author describes the most famous passanger of this ship, the naturalist Charles Darwin at the occasion of the 100th anniversary of his death and the publication of his book on his travels around the world, which was reprinted in 1955.

geography - biology - Charles Darwin - anniversary - Czechoslovakia. 147753.

269. MUCHA, J.:

Juan de la Costa

Lidé a země, 31, 1982, No. 10, p. 478, 1 map.

Juan de la Costa was the author of the oldest extant map manuscript from 1500, which concernes new discoveries in America; he was a Spanish navigator and cartographer and accompanied Christopher Columbus on his voyage in 1492-1493, as well as on his second voyage 1493-1494. In 1499-1500 he participated in the expedition of Alphonso de Hojeda and Amerigus Vespuccio as a ship´s capitan.

geography - historical geography - Juan de la Costa - Czechoslovakia. 147753.

270. PLEŠINGER, V.:

Adolf Parlesák (1908-1981)

Lidí a země, 31, 1982, No. 3, pp. 136-137. 1 photo.

On December 1st, 1981 Adolf Parlesák died in Prague at the age of 73 years. He was one of the most ouštanding Czech travellers in the period between both World Wars. He travelled by bicycle throught the south and south-east of Europe, by ship on the Mediterranean sea and then by bicycle through Asia Minor, across the Sinai desert, up-stream along the Nile river, through the Nubian desert, nothern Ethiopia and Yemen. He werved as a navigation officer on the ships of the Lloyd Company from Trieste to India, Ceylon, Japan, Taiwan and South China. During the war with Ethiopia he became a military advisor and instructor in this country and participated personally in the fighting against the Italians. In 1937 he was in Spain as a military correspondent. He spoke 12 languages.

geography - historical geography - Adolf Parlesák - anniversary - Czechoslovakia. 147753.

271. SEGET, K.:
Cesty Antonína Friče (The travels of A. Frič)
Lidé a země, 31, 1982, No. 7, pp. 318-319.
1 photo.

Antonín Frič was an outstanding Czech zoologist in the second half of the 19th century. He frequently travelled abroad to collect exhibits for what is now the National Museum. He visited foreign natural history museums,universities, zoological gardens, marine aquariums, etc. He also organised many excursions where he bought or exchanged zoological, paleontological and petrographic exhibits. He published various papers in the Archives for Natural Science Research in Bohemia and elsewhere. His travels took him to the Banat, the lower Danube valley, Croatia, Dalmatia, Montenegro, Germany, France, the Netherlands, England, Denmark, Scotland, Helgoland and the USA. He wrote about his travels to the journals Živa, Vesmír and the Journal of the National Museum, as well as to the daily newpaper Národní listy. His travellogues about Europe and the USA contain a number of interesting geographical comments which are still valid. He was also the publisher of the journal Vesmír.

geography - historical geography - Antonín Frič - 147753

272. SKALICKÝ, J.:
Osudy sbírek Dr. Emila Holuba (The fate of the
collections gathered by Dr. E. Holub)
Lidé a země, 31, 1982, No. 10, pp. 473-474.
2 photos.

In 1982, 135 years have elapsed since the birth of Dr. Emil Holub and in 1982, 110 years since Dr. Holub set out on his first trip to south Africa.During this trip (1872-1879) he gathered 30900 various objects, especially pertaining to zoology and botany, as well as ethnography. Vojta Náprstek organised an exhibition of these collections. Holub offered the majority of these exhibits to the Museum of the Bohemian Kingdom in Prague but prof. Frič refused the donation because of a lack of space and only a fraction of these items became the property of the museum. The remainder stayed in what was later the Náprstek Museum and then came to Vienna. In 1883-1887 Holub again traveled and this time brought back 150 crates of various objects, part of which were exhibited in Vienna in 1891 and in Prague in 1892. The Museum acquired only 150 objects from this collection. Chicago in the USA offered 1 million crowns for the collection. In view of the lack of interest on the part of Prague, Holub donated his collections to 37 different European and 3 American museums and to a number of institutes and schools throughout Bohemia and Moravia. For this reason in 1950 the Ministry of Education appealed to all schools to concentrate items from the original Holub collections at the town of Holice.

geography - historical geography - Emil Holub - anniversary - Czechoslovakia. 147753

273. TAUFEROVÁ, J.:
Národní park Warrumbungle (The Warrumbungle National Park)
Lidé a země, 31, 1982, No. 9, pp. 401-404.
6 photos, 3 figs., 1 map.

520 kilometers to the northwest of Sidney in New South Wales (in Australia) a large range of volcanic mountains is found, which is one of the most interesting places on Earth from the point of view of tourism and moutaineering. The most beautiful section of these mountains has since 1936 been set aside as a National Park. The author discribes her trip through the park, its natural scenery, flora and fauna.

geography - nature conservation - national park - Australia - Czechoslovakia. 147753.

274. TOMAS, J.:
Hans Egede a moravští bratři (Hans Egede and the Moravian Brethren)
Lidé a země, 31, 1982, No. 7, pp. 299-300.
2 photos.

A thousand years ago Norwegian and Islandic farmers on Viking boats occupied Greenland and colonized its southern part. But approximately 500 years later the Vikings had disappeared from Greenland. In 1721 Hans Egede received permission from the Danish king to go to Greenland, to spread Christianity among the natives and to trade with them. At the same time Egede wanted to discover the descendants of the Vikings. But he did not find them. He explored Greenland, studied the Eskymos, translated their language into Danish and translated the Bible into their language. The Moravian

Brethren church from Bohemia also came to Greenland to help Egede; they founded a mission in Gothabu. The Moravian Brethren mission was in Greenland until 1900.

geography - historical geography - Greenland - Hans Egede - Czechoslovakia. 147753.

275. BAYADZHIEVA, M.:
Pred stogodishniya yubiley na Georgi Dimitrov
(Before the 100th anniversary of the birth of Georgi Dimitrov)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 7-11.

June 18th 1982 is the 100th anniversary of the birth of Georgi Dimitrov, an outstanding member of the international Communist and working-class movement and a fighter against Fascism. This day will be celebrated throughout Bulgaria as a national holiday. The anniversary will mobilise teachers to increase their endeavours in ideological educational work in schools, in Young Pioneer Organisations and in the Komsomol. For acquainting pupils with the life of Georgi Dimitrov the author suggests panel discussions for pupils in the 3rd and 4th classes and for those in the 5th to 8th classes within the framework of geography instruction. Also group activities by pupils are recommended.

geography - Georgi Dimitrov - Communist education - group instruction - anniversary - Bulgaria. 147705

276. JANISZEWSKI, M.:
Wspomnienie o Aleksandrze Kosibie (18.1.1901 - 18.9.1981)
(In memory of Alexander Kosibie, 18.1.1901 - 18.9.1981)
Geografia w szkole, 35, 1982, No. 1, pp. 17-19.

Alexander Kosibie, the geographer, studied physics in 1923 and then continued in the study of geophysics and geography. His first important work concerned snow, glaciers and their effects. He studied glaciers in the Antarctic, as well as on the north of the Scandinavian peninsula, where near Troms he discovered a large iron ore deposit; this discovery was passed on to the Swedish government as a gift. He then studied the icecap in Greenland, especially in the Bay of Disko. He also colleborated in the creation of a new Polish Atlas, wrote about the climate of Silesia and founded an observatory and climatological laboratory at the University at Wroclaw (Breslau).

geography - historical geography - climatology - glaciers - Alexander Kosiba - anniversary - Poland.
147753.

277. KALASHNIKOVA, T.M.:
K 90 letiyu N.N. Kolosovskogo (The 90th anniversary of the birth of N.N. Kolesovski)
Geografiya v shkole, 49, 1982, No. 1, pp. 20-21.

Next to N.N. Baranski, N.N. Kolosovski is the founder of a modern approach to economic geography. He contributed to changing this discipline from mere description into a science based on modern analytical and mathematical methods. His scientific work was closely linked to practical economic problems. His main idea in the book "The theory of creating economic regions" is that in the allocation of industrial enterprises it is necessary to take into account the general economic structure of the region and whole country. At present this principle has become established in all economic documents, especially in five-year plans. Kolosovski was an expert in economics and the organisation of transportation, he wrote the first theoretical transportation geography, which is closely linked to the geography of industrial plants. In his final years he concentrated on the forecasting of natural processes, which are the consequence of the economic activity of the population. He died in 1954.

geography - historical geography - N.N.Kolosovski - soc-economic geography - USSR. 147753

278. KIRADZHIEV, S.:
Vladimir Popov
Obuchenieto po geografiya, 25, 1982, No. 2, pp. 47-48.

The author recalls the seventieth birthday of an outstanding scientist from the Geographical Institute of the Bulgarian Academy of Sciences, Vladimir Popov. During his career as an educator he participated in the creation of a number of textbooks, slide series and other teaching media. He also wrote a number of textbooks and manuals on the didactics of geography and also approximately 50 publications on the geomorphology and speleology of Bulgaria. After World War II he was awarded for his participation in the struggle against Fascism. At the Speleological Congress at Olomouc he recieved an award.

geography - historical geography - Vladimir Popov - speleology - geomorphology - Bulgaria. 147705.

279. KOČÁREK, E.:
In memoriam Dr. František Nekovář (In memory of Dr. F. Nekovář)
Přírodní vědy ve škole, 33, 1981-1982, No. 6, p. 239.

Dr. F. Nekovář was born in June 1910 in Brno and died in July 1981. After receiving a degree in 1934-35 he became an assitant to prof. Vitásek at the University in Brno. His doctor´s dissertation was called "Precipitation in the southeastern Alps and adjoining areas". Later he taught at the Pedagogical Faculty in České Budějovice, where he specialized in climatology. Besides a large number of scientific papers he also published a three-volume manual for teachers called "The geographical image of the South Bohemian Region. - Natural Conditions". He was a highly active member of the Czechoslovak Geographical Society. As a young man he was active in sports.

geography - climatology - geomorphology - František Nekovář - death - Czechoslovakia. 147705.

280. KRŠKA, K.:
Za profesorem Mikulášem Končkem (In memory of prof. M. Konček)
Lidé a země, 31, 1982, p. 568.

On August 16th, 1982 Dr. Mikuláš Konček died in Bratislava. He was a doctor of mathematical sciences, a professor at the Comenius University in Bratislava and an outstanding Czechoslovak climatologist and meteorologist. He contributed to the education of a generation of geographers at the universities in Bratislava and Brno. His publications have become a permanent part of our basic geographical literature.

geography - climatology - Mikuláš Konček - Czechoslovakia. 147703.

281. **MAKEEV, A.F.:**
Entuziasm uchitelya (The enthusiasm of a teacher)
Geografiya v shkole, 49, 1982, No. 6, pp. 56-57.

The author describes the life and work of C.E. Biryuk, a geography and geology teacher from Ulyanovsk. He devoted all his life to the education of his pupils and to a love of his native region. He also organised nature conservation hobby clubs and numerous excursions. For his school he created large collections of zoology, botany and geography specimens and also of the findings of an archeological study of the region for use in instruction.

geography - geology - teacher + secondary school - Makeev V.F. - excursions - hobby clubs - USSR. 147705.

282. **MICHALCZEK, J.:**
Głowne idee v życiu Gustawa Wuttkego (The main ideas in the life of Gustaw Wuttke)
Czasopismo geograficzne, 53, 1982, No. 1, pp. 3-17.

The author describes the permanent contribution made by this outstanding Polish educator to the development of geography and the didactics of geography. He made an important contribution to defining the effectiveness of instruction and stressed the importance of education by the content of what is being taught. The author also provides a brief bibliography of his most important publications, which include a number of textbooks and handbooks for teachers.

geography - G. Wuttke - teacher + geography - higher education - Poland. 147705.

283. MÖBIUS, G.:
Zur Erinnerung an Alfred Wagener. Aus Anlass der 70. Wiederkehr seiner Erstpublikation zur Kontinentalverschiebungenhopothese (In memory of Alfred Wagener. At the occasion of the 70th anniversary of the publication of his hypothesis concerning continental drift) Petermanns geographische Mitteilungen, 126, 1982, No. 3, pp. 137-148.

Alfred Wagener is internationally acclaimed as the founder of a modern approach to the development of the continents and oceans. In 1912 he published his ideas concerning the development of the continents, which began with the creation of an original continent - Pangea - over 200 million years ago. In later stages of the Earth's development this original continent was broken up into new existing continents which on the basis of drift came to their present positions. Wagener was above all a meteorologist; he studied extensively in Greenland. His drift theory was accepted only gradually. At the beginning of the sixties our knowledge concerning continental shelves greatly increased and theories concerning planetary tectonics were developed and confirmed the drift theory. According to these theories the position of the continents continues to constantly change and it was Wagener who first pointed this out.

geography - scientific theories - anniversary - A. Wagener - GDR. 147705.

284. PENKOV, J.:
Zavetite na Georgi Dimitrov (References to Georgi Dimitrov)
Obuchenieto po geografiya, 25, 1982, No. 3, pp. 1-6.
3 tabs.

The author of the article recalls the 100th anniversary of the birth of Georgi Dimitrov, his historic struggle against German Fascism and after 1944 his struggle for the socialist nature of the country. He also stresses his endeavours for the economic development of Bulgaria, its industrialisation, electrification, as well as the modernisation and mechanization of agriculture. Close economic cooperation with the Soviet Union is also an important heritage of Georgi Dimitrov.

geography instruction - anniversary -G.Dimitrov -Bulgaria. 147753.

285. PÍPKOVÁ, M.:
Sté výročí N.N. Baranského. (The centenary of N.N. Baranskiy)
Přírodní vědy ve škole, 33, 1981-1982, No. 3, pp. 117-118.

In 1981, 100 years passed since the birth of the outstanding Soviet geographer N.N. Baranskiy (born January 27th 1881 in Tomsk and died in 1963 in Moscow). He was the founder of a new branch of geography - urban geography. He wrote a number of scientific treatises and textbooks, 235 reviews for textbooks and was active in the didactics of geography. He received a number of awards and medals for his outstanding work. In 1939 he became corresponding member of the Academy of Sciences of the USSR.

science - USSR - anniversary - N.N. Baranskiy - Czechoslovakia. 147705.

286. SUZYUMOV, E.M.:
Imena geografov na bortu korabley (Geographers after whom ships have been named)
Geografiya v shkole, 49, 1982, No. 3, pp. 15-21.

The author cites the names of Soviet ships which are usually named after famous people, including explorers and those who made important geographical discoveries. The article provides interesting information about Semyon Deshnev, the discoverer of the passage between Asia and Northern America and Vitus Beering, the discoverer of the northwestern coast of the North American continent after whom a strait, sea and island are named. Among Soviet geographers there is Rudolf Samolyovich, one of the first Soviet Antarctic explorers.

geography - historical geography - geographers - USSR. 147753.

287. TRÁVNÍČEK, D.:
Willian John Gill
Lidé a země, 31, 1982, No. 8, p. 358.

Willian John Gill travelled extensively in India, Iran, China, Burma and Afganistan. During a crossing of the Sinai desert he was murdered together with E.H. Palmer. His important contribution to geography are precise measurments of the location of a number of places and his two volume book The River of Golden Sand about a river in China. He was born in 1843 and died in 1882.

geography - historical geography - W.J. Gill - Czechoslovakia. 147753.

288. VOTRUBEC, C.:
Cesty Miry Holzbachové (The travels of Mira Holzbachová)
Lidé a země, 31, 1982, No. 9, p. 422.

Mira Holzbachová (1901-1982) was a dancer and choregrapher, who studied at the foremost European dance schools and then founded a dance school in Prague. From 1924 to 1927 she worked in the well known Osvobozené Theatre in Prague and from 1934 she travelled with a theatrical company to the Soviet Union, Franme, Britain, to Spain where she danced for the Republican armies and to the USA where she found herself at the beginning of World War II and where she thus stayed for 7 years. She studied various Indian tribes. After her return she wrote several books about American Indians. After her return she also worked for many years in Czechoslovak Radio and as an active newspaperwomen. She recieved the Award of the 20th Anniversary of the Liberation of Czechoslovakia.

historical geography - Mira Holzbachová - population geography - Czechoslovakia. 147753.

289. VOTRUBEC, C.:
K 125 výročí Viléma Němce (At the occasion of the 125th anniversary of Vilém Němec)
Lidé a země, 31, 1982, No. 12, pp. 567-568.

In 1982, 125 years have elapsed since the birth of Vilém Němec, an outstanding traveller in Africa, a taxidermist and organizer of zoological gardens. He was born in 1857 in Prague where the received a degree in zoology. He travelled to the Balkans, to Serbia, what is now Bulgaria and to Turkey, Jerusalem, the Middle East and Africa. He lived 25 years in Cairo and from there organised numerous scientific and hunting expeditions to Africa and Asia. He travelled and carried out zoological studies in the Sinai, Somalia, Ethiopia, Sudana and Uganda. He greatly extended the zoological collections of the National Museum in Prague and the Náprstek Museum. After returning home he wrote a number of travellogues and books of adventure. The most popular of these are "Pod žhavým sluncem" (Under a Burning Sun) and "25 let v Africe" (25 Years in Africa).

geography - zoology - historical geography - Vilém Němec - anniversary - Czechoslovakia. 147753.

15. Articles containing scientific information on geography

290. MOLDÁN, B.:

Koloběh fosforu (The circulation of phosphorus)

Lidé a země, 31, 1982, No.6, pp. 262-264

The author describes the circulation of phosphorus in living organisms. There is less than 0.1 % of P in a biomass, while in the dry matter of the human body only 1 % (in bones). Nevertheless phosphorus compounds have a very important function in living bodies as a source of ATP energy. In the crust of the Earth, phosphorus equals 0.12 % and the world average P content in surface waters is 0.02 mg/l, in marine water 0.08 mg/l. The phosphorus cycle is mostly connected with the lithosphere. Phosphorus sources are unrenewable and their complete depletion could become a limiting factor for the development of civilisation on Earth.

geography - physical geography - phosphorus - Czechoslovakia. 147755.

291. TRÁVNÍČEK, D.:
Sto let od narození D. Mawsona (The 100th anniversary of the birth of D. Mawson.)
Lidé a země, 31, 1982, No.5,pp. 204.

D. Mawson, who was born in May 1882 in Bradford in England, was an outstanding Antarctic explorer. In 1920 he became a professor in Adelaide in Australia and in 1908-1909 he participated in the south pole expedition of E. Shackelton who on sleigh explored the inland of Victoria Land and the coastline of King George Vth Land. He wrote a book called the Home of Blissards about his explorations. He continued in his explorations until 1931 and died in Adeleide in 1958.

geography - historical geography - D. Mawson,, - Antarctica - Czechoslovakia. 147755.

292. TRÁVNÍČEK, D.:
Sto let od úmrtí J.N. Crevauxe (The 100th anniversary of the death of J.N. Crevauxe)
Lidé a země, 31, 1982, No. 5, p. 204.

On May 13th 1982, 100 years elapsed since the death of J.N. Crevauxe, who was a military physician and traveller in South Africa (born 1.4.1847). He was a physician in Franch Guayana, where he also studied the geography and hydrology of the norther tributanies of the Amazon river. He was killed by Indians of the Tobi tribe during an expedition to the source of the river Paraguay in the remote Gran Chako region. The author stresses the importance of his scientific contribution.

geography - historical geography - J.N. Crevauxe - geomorphology - hydrography - Czechoslovakia. 147755.

15.1 Mathematical geography

293. MUNZAR, J.:
400 let gregoriánského kalendáře (400 years of the Gregorian calander)
Lidé a země, 31, 1982, No. 10, pp. 467-468.
1 tab.

In 1582 pope Gregory XIII enacted a reform of the then used Julian calander by issuing a papal bull called "Inter gravissimus". On the basis of this reform the day after Thursday, October 4th, 1582 was Friday, October 15th 1582. This did away with the inprecision of the Julian calander which during the 1200 years it was in use accumulated 10 days of error. The author of the article describes in detail the history of the introduction of the Gregorian calander, which is now universally acknowledged with the exception of the Orthodox Church.

geography - mathematical geography - Gregorian calander + anniversary - Czechoslovakia. 147755.

15.2 Physical geography

294. ANDRES, W.:
Hogger und Tassili. Das westliche Zentralmassiv der Sahara (Hogger and Tassili. The western central massif of the Sahara)
Geographische Rundschau, 34, 1982, No. 6, pp. 269-274.
Lit. 8, 7 photographs, 1 fig.

The Sahara is a desert the size of a continent and in recent decades it has become a focus of attention in view of the natural resources found there, as well as studies of the palioclimate in the area. It has also become a centre of scientific and economic activity. In spite of the Sahara's size, its geography is quite simple. The Precambrian bedrock reaches the surface in several places, sometimes in the form of sills, elsewhere as large sedimentation basins in whose centre large marine and continental sediments can be found which cover the crystalline bedrock. The transition from a sill into a basin demonstrates the typical pattern of geological layers whose sequence has not been change even by the damper climate which this area used to have or by the present arid climate. A satellite photo shows these layers very clearly. The mountain massifs of Hoggar and Tassili, as well as Tibesti are especially well suited for the study of paleoclimate. A satellite photography covers an area of 250 000 km^2.

geography - physical geography - desert - FRG. 147759.

295. AURADA, K.D.:
Ion run off and chemical denudation - Regional differentiation and control mechanism
Petermanns geographische Mitteilungen, 126, No. 1,
pp. 23-36. Lit. 19, 7 photos

Most recent findings on the subject of the world water balance and the hydrographic composition of terrestrial waters assume an average ion run off equal to $4.3.\ 10^9$ tons a^{-1} and/or with a cyclical share of precipitation to $3.6.\ 10^9$ tons a^{-1} and with an average chemical denudation of 1.3 and/or 1.1 $g.s^{-1}\ km^2$. Estimates of global anthropogenic intervention are $0,7.10^9$ tons a^{-1} which leads to local precipitation which is destabilising for hydrological and geomorphological systems, whose impact is compensated by specific structures and processes. The anthropogenic input of ions is of secondary significance, but in local precipitation it can lead to a loss of structural equilibrium.

geography - physical geography - denudation - hydrology - GDR. 147755.

296. BÁRTL, S.:
Polární rok (The Polar Year)
Lidé a země, 31, 1982, No. 7, pp. 294-298.
1 photo, 1 map, 3 figs.

The first International Polar Year took place in 1882-1883 on the basis of the initiative of the polar explorer and lieutenant in the Austrian-Hungarian army Weyprecht, who was a member of the expedition on the steamship Tegetthoff, which discovered Franz-Josef Land. 11 countries participated in this first Polar Year which founded 14 observation posts (12 around the North Pole and 2 around the South Pole). However these expeditions proved to be very expensive and costly in terms of human lives. The second International Polar Year was organised in 1932-1933 and 70 arctic observation posts participated. The so far largest event was the International Geophysical Year (1957-1958) and the International Year of the Quiet Sun (1964-1965).

geography - physical geography - historical geography - polar circle. 147755.

297. BOSCHARDT, D.:
Geoökologische Erkundung und hydrologische Analyse von Kleineinzugsgebieten der unteren Mittelgebirgsbereiche, dargestellt am Beispiel von Experimentalgebieten der oberen Selke (Harz) (The geo-ecological study and hydrobiological analysis of small selected territories at lower altitudes in the Central Massiv, demonstrated on the basis of the example of the upper Selke river valley in the Harz)
Petermanns geographische Mitteilungen, 126, 1982, No. 4, pp. 251-262. Lit. 33, 7 figs., 2 tabs.

The author analyses small areas of land used for agriculture or forest cultivation in the upper valley of the Selke river in the German Central Massif, on the basis of a geo-ecological selection system which serves as the basis for systematic hydrological observations. The territory as a whole as a supplier of water is compared with the small area and model concepts which include the influence of geomorphological factors;

the average value of run off water in the river is analysed in relation to the utilization of water on the small areas studied. The influence of man on the run off factors are specifically analysed.

geography - ecological geography - hydrology - agriculture - GDR. 147755.

298. BRABEC, Z.:
Cílem je Fitzroy (Mt. Fitzroy - our target)
Lidí a země, 31, 1982, No. 12, pp. 529-532.
6 photos, 1 map.

Mt. Fitzroy is in the Patagonian Alps and has an altitude of 3441 m. It is the highest mountain in the area. In its close vicinity are other mountains also suitable for mountineering such as Cerro Torre, Cerro Poincenot and Cerro Egger. The mountains are part of the Los Glaciares National Park which has an area of 445 990 hectars. Most of this area is covered by a continental glacier called Hielo Continental. The territory in question is 440 km long and 50 to 90 km wide. Fitzroy was first climbed by French mountaineers in 1952 and for the second time by an Argentinian team in 1965. In 1981-1982 it became the target of a group of mountaineers from Czechoslovakia, one of whom here describes their ascent. 5 attempts were made to reach the peak, but in view of bad weather, the actual peak was not reached.

geography - mountaineering - South America - Czechoslovakia. 147755.

299. CUPP, D.:

Avalanche ! I´m OK, I´m alive !

National Geographic, 162, 1982, No. 3, pp. 282-289.
7 photos, 1 fig. 1 map.

The author describes March 31st, 1982 when a huge avalanche fell on Big Cottonwood in the Wasatch Range of Utah in the USA. The avalanche took 7 lives, but four people were saved, as if by a miracle. After spending 5 days in the avalanche Anna Conrad was saved. This avalanche was the largest registered avalanche in the USA in the last 20 years.

geography - physical geography - USA. 147755.

300. CUPP, D.:

Avalanche ! Battling the Juggernaut

National Geographic, 162, 1982, No. 3, pp. 290-305.
12 photos, 3 figs., 1 map.

The author acquaints readers with large avalanches which throughout the world have caused human sacrifice. In the USA the number of avalanches in the Rocky Mountains is estimated at 100 000 in a year with average snowfall.Since 1950 the number of human sacrifices has grown fourfold because of the increased popularity of skiing and other winter sports. The author also describes how an avalanche occurs. It can achieve a speed of 322 km per hour and in Japan the force of an avalanche has been measured at 145 tons per square meter, which is 40 times more force then is required for the demolition of a house. The largest known avalanche fell in Peru as a consequence of an earthquake in 1970 and completely destroyed the town of Yungay with its 18 000 inhabitants. In 218 B.C. an avalanche in the Alps fell on 38 000 soldiers of

Hannibal's army. During World War I approximately 18 000 soldiers died of avalanches in the Alps during fighting between the Italian and Austrian-Hungarian armies. In 1951 there were many lives lost in Switzerland due to avalanches and at that time a national movement was created to combat them. Now in avalanche areas special constructions are built which try to hold off an avalanche or to divert it to a harmless area. The best protection against avalanches are forests.

geography - physical geography - avalanches - USA. 147755.

301. FICHEV, M.:
Vikhrite v svetoviya okean (Whirlpools in the world's oceans)
Obuchenieto po geografiya, *25*, 1982, No. 4, pp. 38-39.

In recent years a great deal of experimental study of the oceans of both hemispheres has been taking place, which among others will also help to clarify the problem of the creation of huge whirlpools, some of which have several hundred kilometers in diameter and high speeds of rotation. Some of the whirlpools observed have various peculiarities and anomalies in temperature and the direction of currents. In general it is assumed that the creation of whirlpools in the oceans of the world is the outcome of the complicated dynamics of deep water and the mutual influence of the ocean and the atmosphere.

geography - hydrography - oceans - Bulgaria. 147755.

302. GABRIEL, B.:
Die Sahara im Quartär, Klima- Landschaft- und Kulturentwicklung (The Sahara in the Quartenary. The development of its climate, landscape and culture)
Geographische Rundschau, 34, 1982, No. 6, pp. 262-268.
Lit. 12, 5 figs.

After the great catastrophe of the Sahel in the seventies a great deal of attention is being devoted to changes in the climate of the Sahara. The problem is whether recent changes are a consequence of human activity or an outcome of natural climate fluctuations. Similar oscillations in climate have been shown to exist in prehistoric times. The Sahara is an old desert, which was arid already in the Palaeozoic and Mesozoic eras. During these changes the mechanism of alternating damper norther pluvian periods with a less damp southern pluvial periods developed. But in the case of the Sahel the dry periods have been definitly more protracted and stronger, due to environmentally damaging human activities which led to a breakdown of the environment after the destruction of the soil's vegetation cover. On the Sahara the same process took place long ago, as a consequence of deforestation caused by the huge consumption of wood for cooling and heating and other uses to which wood was put between 4 and 8 thousand years ago. A study of the cultures found in the Sahara, where the radiocarbon method was used for dating various artefacts found in the desert, including the findings of stone implements, as well as geomorphological studies of fossile flora and fauna and pollen analysis all indicate that in various stages of the Pleistocen era different cultures existed in the area. 8000 years ago south of the Sahara the large Chad lake existed, which reached to the southern slopes of Tibesti and was as large as the Caspian sea is now. The climate then began to rapidly dry out between 7 and 6 thousand years ago. Between 8 to 9 thousand years ago the Sahara was cultivated by man, who raised cereals and cattle hare.

geography - physical geography - climatology - desert + Sahara - FRG. 147759.

303. GORE, R.:
The Mediterranean: Sea of Man's Fate
National Geographic, 162, 1982, No. 6, pp. 694-736.
32 photos, 4 figs., 7 maps.

The Meditteranean sea is not a tranquil place but rather a place for frequent geological upheavals and volcanic activity. Spain alone annually welcomes over 10 million tourists to its shores. At present it is a highly polluted sea. The author concentrates on its geological and volcanic activities. Gibraltar moved to the north about 55 million years ago and the mountain itself was born 160 million years ago. The remnants of Neolithic and Neanderthal man have been found here. Similar geological movements are now taking place at the islands of Delos, Corsica and Sardinia, as well as some parts of Italy. The mountains of eastern Italy were one part of Africa, just as the southern Alps were. 6 million years ago the Mediterranian sea dried up and for one and a half million years its western part was changed into a 2000 meter deep desert depression. Also at present more water is evaporated from the surface of this sea than is brought to it by the rivers which flow into it. In Mytilinia on the island of Samos in the Aegean sea the local museum has specimens of animals now extinct which used to live here, including mastodons, rhinoceros, hyenas, horses and samotheria, an extinct specie of giraffes. The islands of the Aegean were part of what is now Turkey and from a geological point of view also Crete is one of them. 2.5 million years ago volcanoes were active in what is now the Aegean sea. The volcano Thera on the island of Santorin probably destroyed the Minoan civilization. In the western part of the Mediterranian sea a chain of active volcanoes still exists. Lipary has not erupted since 525 B.C., Vulcano erupts one or twice every century and Stromboli continually, while Etna, which is 3300 m high, represents one of the greatest problems for those who study volcanoes; it errupts 10 to 20 times in each century. The most recent eruption of Vesuvius was 1944. Possuolo erupted 36 000 years ago and a caldera was formed, which had a diameter of 12 km, and which now forms a bay. In 1980 an earthquake occured in Italy. Cyprus is now without any forests; in the course of 3000 years approximately 200 000 tons of copper were mined there and charcoal output made from wood used up forests of 150 000 km^2 in area. Since the total area of Cyprus is only 9 300 km^2, charcoal had to be imported. The Troodos Mountains have snow in the winter and it is from these mountains that water is obtained. Without an inflow of water from the Atlantic Ocean the level of the Mediterranean sea would decline by 1.5 meters annually and so it would have cease to exist long ago. Human history in this area goes back 8000 years and it was human intervention which led to the deforestation of the slopes along the sea, thus causing rapid erosion, which still continues. At present tourism is another important ecological problem of this area. Israel intends to build a tunnel to raise the level of the Red sea, while Egypt wants to connect the Qattarah depression by canal with the sea to creat a huge lake. The Moroccan king Hassan wants to connect Morocco with Spain by bridge, whereas the Spanish would welcome an undersea canal.

geography - geology - physical geography - volcanoes - earthquakes - USA. 147755.

304. HENKIEL, A.:
O pochodzeniu kratowej sieci rzecznej Beskidow wschodnich
(On the origins of the lattice-like river patterns in the eastern Beskides Mountains)
Czasopismo geograficzne, 53, 1982, No.1, pp. 19-27.
Lit. 16, figs. 2

The article explains the unusual lattice-like patterns [illegible] rivers and streams in the Beskides mountains of Poland. A study of the structure of the water network and a reconstruction of paleographical stages of the morphological development of the Carpathian mountains have confirmed that a complex and long-term process has taken place which caused the water network in the area to develop in the lower Pleistocene on the basis of epigenesis and selective erosion, as well as fetroactive erosion, which is explained on the basis of modern theories in a simplified form. The main cause of the lattice-like pattern of the water network is probably the unusually regular geological structure of the area.

geography - physical geography - hydrography - regional geography - mountains - Poland. 147755.

305. HENNIG, E. - HENNIG, G.:
Die Alterbestimmung von Tropfsteinen (Höhlensintern). Materialen für ein Thema der physischen Geographie im 9. - 10. Schuljahr (Determining the age of stalactite and stagmite caves and cave sinters. Material for teaching physical geography in the 9th and 10th classes) Geographie im Unterricht, 7, 1982, No. 4, pp. 147-151. Lit. 8, 2 figs.

A stalactite and stalagmite cave with its bizzare shape and various forms usually leads visitors to ask many questions. Findings of human or animal bones in these caves show that prehistoric man made his home in some of them. The sinter found in these caves has been shown to be 200 000 years old, while the bones of bears between 50 and 70 000 years old. By making cross--sections of the sinter, it is possible to read in the history of the cave. The presence of red clays indicates a warm and damp climate in the vicinity. Small brown or red glass-like spheres which are sometimes found in sinter caves have not yet been clearly explained by scientists. In a warm and moist climate the quantity of sinter in the caves increases, while in cool weather only small quantities are formed. The basic dating methods for sinter include the measurment of annual increments, the use of radiactive C^{14} or Thorium^{230} or Uranium^{234}, as well as thermoluminescence, and the potassium method. The author suggests the use of this topic in geography instruction in view of the fact that it also provides various information on the history of man.

geography - physical geography - karst - dating methods - FRG. 147713.

306. HELBIG, A.:
Zur Modification der Atmosfäre über Städten und Industriegebieten (Modifications occuring in the atmosphere above cities and industrial areas)
Geographische Berichte, 28, 1982, No. 1, pp. 31-41.
7 figs., 5 tabs.

In the last two decades an increased interest in studies concerning urban climates and changes in the atmosphere which occur above urban areas and industrial plants can be seen worldwide. Due to urbanisation, energy consumption systems are becoming increasingly complex and only a detailed knowledge of what is actually taking place in the atmosphere can lead to limiting negative effects and to an optimalisation of the relation between man and his environment. The author deals in detail with the creation of various layers in the atmosphere and their mutual interaction in urban areas.

geography - physical geography - atmosphere - urban geography - air pollution - FRG. 147753

307. HERZ, K.:
Arealstrukturanalyse der Umweltbeziehungen der Tropenvegetation (An analysis of the structure of a location and its relation to the environment created by tropical vegetation)
Zeitschrift für den Erdkundeunterricht, 34, 1982, No. 7, pp. 258-268. 4 figs.

The author describes the theoretical foundations for analysing the structure of the soil in relation to the structure of a specific location; these foundations include the principle of polarity, correlations, and hierarchy. These theoretical postulates provide a research method, which the author demontrates on the basis of the example of the relation between tropical vegetation at a specific location and a specific hierarchy in the natural environment. The examples cited are from Tanzania and northeastern Zambia. In conclusion the author indicates a correlation model between vegetation and the environment.

geography - physical geography - phytogeography - tropics - Africa - GDR. 147753.

308. HIPMAN, P.:
Na dno republiky (At the bottom of the Republic)
Lidé a země, 31, 1982, No. 4, pp. 146-151.
5 figs., 1 map.

The author describes a decent he made to a cave at Starý hrad near Mount Ďumbier in Slovakia which began 1430 meters above sea level and ended 343 meters above sea level. The cave was explored by a speleology mountaineering team from Brno. The author describes the cave and its huge Revaj dome which is 40 000 m^3 large.

geography - physical geography - karst - Czechoslovakia. 147755.

309. HRDINA, V.:
Krasová plošina Padis (The Padis karst plateau)
Lidé a země, 31, 1982, No. 7, pp. 324-327.
3 photos, 2 maps.

The Padis Plateau is in the northwestern part of Rumania, 80 km from the border town of Oradea in the northwestern part of the Muntii Apusendi mountain range. The author explored the karst canyon

Crisul Repede near the town of Huedin, where he found three sinkholes over 200 meters deep, which were created by the breakdown of potholes. This karst area has Triassic and Permian limestones.Also the ice cavern Focul Viu is found here, as well as karst lakes Lacul din and Varaspaia.

geography - geomorphology - physical geography - karst - Rumania - Czechoslovakia. 147755.

310. CHROBOK, S.M. - MARKUSE, G. - NITZ, B.:
Abschmelz- und Sedimentationsprozesse im Rückland weichselhoch- bis spät glazialer Marginalzonen des Bernims und der Uckermark /mittlere DDR/)
(Melting and sedimentation processes in the hinterland at Vistula level, up to the lower glacial marginal zone in Bernim and Uckermark, in the central German Democratic Republic)
Petermanns Geographische Mitteilungen, 126, 1982, No. 2, pp. 95-102. Lit. 18, 8 figs.

There are approximately 150 000 basins on the territory of the GDR in the area of earliest glacial drift. These basins represent the environment of a geological era and hence they often contain sediments which provide valuable data for a geologist or geographer. This is also true as far as studying glacial movements in the Quartenary are concerned. A study of the zones also contributes to learning about the early and medium glacial period and the Holocene processes which took place there.

geography - physical geography - geology - continental glacier - GDR. 147755.

311. CHVOJKA, P.:
Zřícení Neuberovy věže (The collapse of the Neuber tower)
Lidé a země, 31, 1982, No. 7, pp. 319-320.
2 photos.

In the night, between the 21st and 22nd of November 1981, the so-called Neuber tower in the sandstone formations called Tiské stěny in northern Bohemia (in the district of Ústí nad Labem), collapsed. Geologically the tower was part of the Cenomanian transgression sandstone sediments. Industrial exhalations contributed to accelerating this collapse.

geography - geology - physical geography - sandstones - Czechoslovakia. 147755.

312. JAHN, A.:
O najdawniejszych polskich pogladach na zagadnenie zlodowacenia nižnowogo (Concerning the oldest Polish ideas on lowland glaciation)
Czasopismo geograficzne, 53, 1982, No. 2, pp. 121-13o.
Lit. 24, 1 photo.

Polish scientists reacted very swiftly to the theory of European glaciation formulated in 1875 by Torello. One of the first Polish scientists who accepted this theory was Marian Łomnicki, a geographer and geologist who has been completely forgotten. He studied the geography of the Volyno-Podolskaya Upland. The article assesses the work of this scientist, who was the first to study the development of the relief in Volyn, which was formed under the influence of glacial waters and the ice of the Great Scandinavian Glacier.

geography - physical geography - continental glaciation - regional geography - Poland. 147755.

313. JANKE, W. - LAMPE, H.:
Zur Holozänentwicklung von Ausgleichsküsten, dargestellt am Beispiel einer Nehrung und ihres Strandsees bei Binz (Rügen) (Concerning Holocene developments to straighten seacoasts, demonstrated on the example of a sand spit and its coastal lake near Binz on the Rügen Peninsula)
Petermanns Geographische Mitteilungen, 126, 1982, No. 2, pp. 75-83, Lit. 10, 5 figs.

On the basis of 7 drill holes made at Schumachter See and at the sand spit at Binz on Rügen the author discusses Holocene development. By studying pollen findings, diatoms and by carrying out granulometric measurments, scientists have been successful in determining the precise Holocene stage in which this area was created. An advantage of this method of work is the availability of an ideal profile which shows the sequence of sediments in the area and its typical fauna (Bethynia, Cardium, Mytilus,Macoma, Littorina, Hydrobie, Tehodoxus, Volvata), thus making it possible to precisely determine older layers.

geography - geology - physical geography -continental glaciation - GDR. 147755.

314. JUDGE, J.:
On the Slope of Vesuvius. A Buried Roman Town Gives up its Dead
National Geographic, 162, 1982. No. 6, pp. 687-693.
14 photos, 1 fig., 1 map.

On October 24th and 25th, 79 A.D. Vesuvius erupted and buried the town of Herculaneum, as well as neighboring Pompei with an 18 meter high layer of volcanic ash. In 1709 archeologists for the first time began to excavate the area and to show the world various artefacts including bronze and marble statues, murals on the walls, as well as the streets and houses in these towns. The new findings at Hercolaneum are very interesting and include a lady buried in the ash, complete with gold rings set with precious stones on the fingers, her head resting on the sand of a beach by what was then the sea, with a boat close by and near the ships cabin 24 corpses with painful facial expressions. All the corpses had their teeth intact (there was much less sugar in the food of that time). At present the modern town of Ercolano, a suburb of Napels, stands on top of the ash hill. The excavations provide a very good picture of the life of an ancient Roman town which has a population of 4000. The majority were able to escape the destruction. The author describes the methods used to preserve the bones of the skeletons found. The eruption of Vesuvius at the time launched volcanic bombs which dropped at distances of 12 miles.On the second day of the eruption a dark cloud was launched from Vesuvius containing ash and gases, which destroyed both towns in the course of 5 minutes. In the city baths the corpses of 6 adults, 2 adolescents and 4 children were found in a single room, where they had attempted to hide.

geography - geology - volcanoes - archeology - Italy - USA. 147755.

315. KLIEWE, H. - JANKE, W.:
Der holozäne Wasserspiegelansteig der Ostsee in nördlichen Küstengebiet der DDR (The Holocene rise of the surface of the Baltic sea and its impact on the northern coastline of the GDR)
Petermanns geographische Mitteilungen, 162,No. 2, pp. 65-74.
Lit. 40, 2 figs.

The article continues in the subject -matter published by both authors in this journal in 1978.
A stratigraphical outline of the Baltic sea during the Holocene and its impact on the northeastern coast of what is now the GDR is interpreted on the basis of dating carried out by the radioactive carbon method and pollen analysis. The authors here discuss isostatical movements which straighten the coast and compare their findings with those arrived at in neighboring countries.

geography - geology - continental glaciation - sea - dating methods - GDR.147755.

316. KLINK,H.J. - GLAWION, R.:
Die natürliche Vegetationsformation der Erde
(The natural formation of vegetation on Earth)
Geographische Rundschau, 34, 1982, No. 10, pp. 461-470.
5 figs.

Vegetation is now a subject of study by geographers as a component of the geosystem and as an expression of the ecological abilities of a spatial potential. The basic notion of vegetation formation in this context is the growth of a set of plants with completed physiological characteristics; it deals specifically with vegetation in Polar and Subpolar areas, which include cold deserts, the tundra and subpolar deciduous forests and their economic utilization and exploitation. Moderately cool Boreal regions which include coniferous forests are very important as a source of timber. In a similar was the article deals with other areas, up to the tropical rainforest and deserts. Since the ecological geography of vegetation makes it possible to study the relation between man and the environment, teachers should devote attention to this problem.

geography - phytogeography - FRG. 147755.

317. KOLP, O.:
Entwicklung und Chronologie des Vor- und Neudarsees
(The development and chronology of the Vordar and Neudars lakes)
Petermanns Geographische Mitteilungen, 126, 1982, No. 2, pp. 85-94. Lit. 35, 8 figs.

The development and chronology of the Vordar and Neudar lakes concerns the development of the whole Baltic coastline.The level of the sea underwent strong fluctuations during the last 4000 years.The present coastline was formed in this area approximately in 3750 B.C., at a time designated by geology as the beginning of the maximum Littorina. At that time the sea receded at a rate of 60 cm every thousand years. The author describes the changes occuring during transgression and regression in this area and the creation of costal dunes.

geography - geology -historical geography -GDR. 147755.

318. KOVAČ, D.:
Na Mount McKinley (Climbing Mount McKinley)
Lidé a země, 31, 1982, No. 5, pp. 200-202.
1 photograph.

The author describes his ascent up Mount McKinley, along the Kahiltna glacier. Mount McKinley is a national park and airplanes land on the glacier. The ascent was attempted by a 10 person Czechoslovak team. Mt. McKinley is the highest mountain in North America with its 6194 meters above sea level. It was climeb in 1913, 1932, 1942 and in other later years. The author describes various routes to the top used by Italian, American, British and Czechoslovak teams. Also a Japanese alternative route exists. But the mountain has already claimed its victims. The Czechoslovak team climbed the peak on June 12th, 1980.

geography - physical geography - mountains - North America - Czechoslovakia. 147755

319. KOŹUCHWSKI, K.:
Strefowe anomalie opadowe w Euroie Europie i Ameryce północnej (Zonal anomalies in rainfall in Europe and North America)
Czasopismo geograficzne, 53, 1982, No. 2, pp. 187-193.
Lit. 2, 4 figs.

The article deals with the spatial distribution of indicators of zonal anomalies is rainfall in Europe and North America. The findings are summed up in a graph, which demonstrates the division into zones, average annual rainfall, average annual rainfall over land and sea and median zonal anomalies in rain fall occuring in Europe and North America.

geography - physical geography - climatology - hydrological balance - comparisons - Europe - North America - Poland.147755.

320. KOŹUCHOWSKI, K.:
Sztuczne cieplo a klimat (Artificial heat and the climate)
Geographia v szkole, 35, 1982, No. 1, pp. 39-42.

All economic activity now places stress on energy savings,including electrical energy. In the production of electrical energy large amounts of heat are freed into the atmosphere; this is becoming an important anthropogenic factor in the environment. But energy output is also connected with the generation of dust emissions and emission of various gases. The composition of the atmosphere is gradually changing, as well as the thermal balance of the Earth. Especially industrial towns are an example of this process: Berlin has 1.7 °C higher temperature then its vicinity, and the degrees centigrade differences for London are 1,5, Toronto - 1.2, New York - 1.1, Moscow - 0.7, Prague - 1.1, Oslo - 0,9, Warsaw - 0.3. In large cities this temperature difference is 1 to 2 °C, the greatest thermal emissions are on Manhattan, then in Moscow, Chicago, Los Angelos. Urban and industrial areas have a lower albedo but they tend to cool off more quickly. The arid nature of urban terrains prevents the loss of heat through the evaporation of water from the soil. In cities there are also fewer days in the year with fog: In Moscow there are 36 to 26 foggy day annually, while in its vicinity 39 to 49 annually; in Leningrad there are 29 to 39 foggy days annually and in the vicinity 36 to 48, which is also the consequence of artificial heat. But all the artificial heat generated on Earth achieves only

$\frac{1}{3.8.\ 10^5}$ of solar heat. Still, annually the production of heat on Earth increases by 6 %, by the year 2050 it will be 24 times greater than today. In the second half of the 21st century the average temperature of the Earth will increase by 1 °C annually. This heating up of the atmosphere as a consequence of emissions is, however, taking place when the Earth is naturally becoming cooler. But the consequences of a combination of natural heating and artificial heat as a consequence of anthropogenic intervention would lead to the melting of the polar icecaps and glaciers and hence to a rise in the sea level of the seas of the world, as well as changes in air circulation in the atmosphere: the centres of continents would dry up while the polar regions would become fertile.

geography - climate - climatology - thermal energy - air pollution - atmosphere - Poland. 147752.

321. KUCZMARSKI, M.:
Uslonecznienie w Polsce w okrese 1961-1970
(Sunshine in Poland in the period 1961-1970)
Czasopismo geograficzne, 53, 1982, No. 2, pp.149-157.
Lit. 9, 4 figs., 1 tab.

The article discusses the variety of the amount of sunshine in various parts of Poland in various seasons and in the course of the years cited in the title. On the basis of an analysis of the data collected, the value of sunshine in the form of median daily figures is summed up in a table. The data has been provided by 65 meteorological stations belonging to the Institute for Meteorology and Water Economy. The amount of sunshine depends on the length of the day and the longitude and latitude of the location; the greatest differences are a consequence of terrain modulation in southern Poland, especially during the autumn and winter. The lowest figures for sunshine come from the Upper Silezian industrial area which suffers from high levels of air pollution.

geography - physical geography - climate - meteorological stations - air pollution - Poland. 147753.

322. ŁAJCZAK, A.:
Wahania temperatury przypowierzchnieowej warstwy w jeziorach tatrzańskich o różnej ekspozycji
(Temperature fluctuations in the surface layer of water in lakes found in the Tatra Mountains, with various exposition times)
Czasopismo geograpficzne, 53, 1982, No.1, pp. 29-44.
Lit. 15, 7 figs.

The article describes differences in temperature regimes of surface layers of water in lakes in the Tatra Mountains. It has been found that the seasonal rhythm of temperature changes in these waters are to a great extent modified by factors dependent upon exposition time, regardless of the altitude and size of the lake. The thermal regimens of the Štrbské pleso and Mořské oko lakes are described in detail, as well as how the measurements were made.

geography - physical geography - mountains - Tatra - lakes + mountains - seasonal rhythms - temperature - regional geography - Poland, 147755.

323. LYSENKO, V.:
Nejhlubší podzemní jezero Českého krasu (The deepest subterranean lake in the Bohemian karst)
Lidí a země, 31, 1982, No. 2, p. 73. 1 fig.

In 1966 a team of divers remeasured the depth of a subterranean lake found in the Podtraťová cave near Srbsko. They arrived at the figure 15 meters, but further measurments yielded a summary figure for the sinkhole and lake as 70 m.

geography - physical geography - karst - cave - Czechoslovakia. 147755.

324. MITYK, J.:
Pojedyncze barchany połnocnego Belužystanu (Individual barchans in northern Baluchistan)
Czasopismo geograficzne, 53, 1982, No. 3-4, p. 273-387. Lit. 24, 1 fig.

The author describes individual morphometrical and textural qualities of the sands found in various symmetrical barchans in the Nok Kundi area of norther Baluchistan. On the basis of selected diagnostic characteristics he found two types of Eolithic sands in the barchans. Their quantity is connected with the direction of the winds, the accumulation of blown sand and the exchange of material within the barchan.

geography - physical geography -desert - regional geography - Baluchistan - Poland. 147755.

325. MOLDÁN, B.:
Koloběh uhlíku (The circulation of carbon)
Lidé a země, 31, 1982, No. 9, pp. 423-425.

Carbon is the element connected with living matter, it is a component of all compounds found in living matter. The total carbon content in living substance is about 50 %. In the Universe and in the Solar System it is the 4th or 5th element as far as quantity is concerned. It represents about 0.5 % of the Earth´s crust, and only 0.02 % of igneous rock. The largest percentage is in asphalt deposits, in graphite and in fossile fuels, where approximately 10^{13} tons of carbon are stored. Carbon is an important element in the hydrosphere (the shells of many species of marine fauna are made of calcium carbonate). In the air, carbon is the 5th most important element (carbon dioxide represents 0.03 %). Living organisms obtain carbon by the assimilation of carbon dioxide from plants, while micro-organisms and animals obtain it from their food. On a planetary scale 3 different speeds should be distinguished: the biological, sedimentary and weathering. The biological cycle is connected with the assimilation of carbon dioxide, the circulation of the biomass and the freeing of carbon dioxide during respiration (annually 100 billion tons of carbon, that is all the atmospheric carbon dioxide for a period of 20 years!). The sedimentary cycle is connected with weathering where carbon dioxide is freed from organic remnants and waste and from there bonded to sediments; part of these sediments come to the surface of the soil where they are weathered and carbon dioxide is freed into the atmosphere. The third cycle is connected with weathering and the slow dissolution of carbonated rocks (limestones).

This cycle is ten thousand times slower then the sedimentation cycle which lasts about 20 000 years. In the atmosphere the carbon dioxide content is constantly growing; in 1850 its concentration was 0.029 % and now it is 0.034 %. Hence the atmosphere is becoming warmer and the number of deserts and semi-deserts is growing. The increasing amount of carbon dioxide in the atmosphere is considered to be very dangerous (the greenhouse effect).

geography - atmosphere - carbon dioxide + cycles - Czechoslovakia. 147755.

326. MOLDÁN, B.:
Koloběh dusíku (The circulation of nitrogen)
Lidé a země, 31, 1982, No. 4, pp. 69-72,
2 photos, 1 graph.

In the middle of the nineteenth century scientists began to understand the importance of nitrogen for plant nutrition and the basic characteristics of its circulation in the soil. Nitrogen from the air is bonded to the soil through symbiotic nitrogen bacteria on the roots of Viviaceae plants. Atmospheric nitrogen is bonded to organic molecules by enzymes and substances of an ammonia-like nature are created which can be used by plants. Due to the action of nitrification bacteria these compounds are changed into nitrates. The cycle is completed by denitrification bacteria which transform nitrates back into atmospheric nitrogen. Earlier studies considered denitrification bacteria in the soil as a negative phenomenon but now, when due to the fact that artificial fertilizers are used to such a large extent the amount of nitrogen in the soil is redundent, denitrification bacteria are considered to be very important and are a key microbial component of the soil. The use of artificial fertilizers has become a very important intervention into the whole nitrogen cycle: the amount of nitrogen in surface waters has increased, as well as in closed seas and many waters are now becoming eutrophic. Such waters are entirely unsuitable for drinking, nitric substances which make their way into food have a toxic effect on humans and some are carcinogennic. Also an abundance of nitrates in the air is dangerous and a threat to the ozone layer, the cause of acid rain and smog.

geography - environmental control - circulation + nitrogen - Czechoslovakia. 147755.

327. MUNZAR, J.:
Meteorologie z dob plachetic (Meteorology from the time of sailing ships)
Lidé a země, 31, 1982, No.12, pp. 549-552.
1 photograph, 1 map.

In August 1982 a faithful copy of a historic Viking sailing boat landed on Norwegian shores with 12 aboard after crossing the Atlantic ocean in 34 days.The ship sailed 4 800 kilometers. The ship sailed without precise maps,modern navigational instruments and without any contact with the world. In this article the author discusses on the basis of this experience how meteorology developed since the times of Columbus, the different winds which blow over the Atlantic and the first map of ocean winds from 1686,made by Halley. At the end of the 18th century all basic meteorological instruments had been discovered and a chronometer made it possible to precisely determine longitude. The Frenchman Francis Beufort, who was vice-admiral and hydrographer of the British navy (1774-1857), drew up a scale for assessing the force of the wind at sea which has 14 degrees.

geography - climatology - geography of maritime transport - meteorological station - Czechoslovakia.
147755

328. NĚMEC, J.:
Valachovské jeskyně (The Valachov cave)
Lidé a země, 31, 1982, No. 12, p. 553. 1 photo.

The Valachov cave is man-made. It is found on the western slope of Valachov, 10 kilometers west of Křivoklát. The cave is 14 meters long, 6 meters wide and 4 meters high. The cave and its vicinity have nevertheless been made into a natural reservation. It documents the scope of processing stony slate in the vicinity of Rakovník and Křivoklát in the 18th and 19th centuries. The stony slate with its pyrite content was first crushed into small pieces and then left in the rain and sunshine. When the pyrites began to disintegrate, iron II sulphate and hydrochloric acid were created;these were dissolved in water and the solution oxidized into iron III sulphate which was called vitriolic lye,from which Bohemian hydrochloric acid was then made. Also plaster for use as a fertilizer was another product of this process. In 1872 this production was stopped. Mineralogist R. Nováček in the twenties of the 20th century discovered a large quantity of secondary sulphur minerals,the most famous of which was Slavikite (named after prof. Slavík from the Charles University).

geography - mineralogy - cave - Czechoslovakia.
147755.

329. PLIT, F.:
Typy krajovrazow pustynnych (Types of desert landscapes)
Geografia v szkole, 35, 1982, No. 5, pp. 221-224.

The author describes various types of deserts, but concentrates specifically on those deserts which are created as a consequence of insufficient rainfall. He also discusses tropical desert zones, which are found around the 30° northern or southern latitude and continental deserts which are found in the interior of continents. Coastal deserts (for instance in Chile) are the results of cool sea currents which reach up to the 5° northern latitude. Also semi-deserts are discussed. The Sahara desert is described in the geography textbook for the 5th class. We can distinguish rocky, stony, gravel and sand deserts. In the Sahara, a rock desert is called hamada, a gravel desert serir and a sand desert erg. The textbook also uses the term clay desert. Rocky deserts found on mountains often have abundant rainfall so that there are large water reserves underground and plants, usually low shrubs grew here with xeromorphic leaves. At the foots of mountains water springs are frequent. Sand deserts are usually extensive in lowlands; under sand dunes subterranean water is near the surface. Plants are usually limited to grasses which do not suffer from a lack of water but from the movement of sand. The least water is found in gravel deserts because after rainfall water rapidly evaporates; only ephemerial plants grow there. The article supplements the subject-matter taught in the 5th class of Polish basic schools.

geography - physical geography - geography instruction - 5th class - basic school- desert - Poland - 147735.

330. PLEŠINGER, V.:
Podzemní voda a její ochrana (Subterranean waters and their conservation)
Lidé a země, 31, 1982, No. 10, pp. 454-457
2 photos, 4 figs.

More than half the water used by the water distribution system comes from subterranean waters. All developed countries strive to provide their urban populations with subteranean and not surface waters: In the USSR this is so in three quarters of the water used, in the GDR four fifths, in Austria and Denmark 100 %. Subterranean waters are studied by hydrogeologists, whose main concern is so-called "fresh" water. The great majority of subterranean water was originally surface water which infliltrated into the rocky environment, only a small part of subterranean waters are condensed from molten subterranean mass or are of fossile origin. The greater part of subterranean waters are constantly moving and form the so-called hydrological cycle. The chemical composition of subterranean water is discussed and the need to protect and conserve these waters is stressed.

geography - Hydrology - water sources + conservation - Czechoslovakia. 147755.

331. ROSENKRANZ, E.:
Aufgaben und Ergebnisse der Meeresforschung aus geographischer Sicht (The tasks and findings of marine research from the point of view of geography)
Geographische Berichte, 27, 1982, No. 3, pp. 145-158.
3 figs., 2 tabs.

The author, who has also written a book called "The Sea and its Utilization" here provides a survey of new scientific findings concerning the seas. He also criticises the fact that geographers in the GDR devote very little attention to the sea, in spite of the fact that this field of study has a long tradition in Germany. Modern studies of the seas require an interdisciplinary approach to the subject-matter. One of the most important disciplines in this context is marine physics. The article describes 4 different research trends which are becoming increasingly important: studying sea water, the structure of the sea bottom, marine biology and energy problems of the seas.

geography - seas - physical geography - research - sea water - sea bottom - sea currents - marine biology - GDR.
147753.

332. ŘEHÁK, I.:
Korāli a geografie (Corals and geography)
Lidé a země, 31, 1982, No. 5, pp. 193-199.
9 photos, 1 map.

Corals are very interesting animals from a geographical point of view. By their activity they make a significant contribution to the structure of the coastline in shallow tropical seas and they contribute to the creation of islands,archipellagos and reefs. The longest reef in the world is the Great Barrier Reef of the northeastern coast of Australie. It is 2000 kilometers long. Corals belong to the class of Anthozoa, which now has 6000 species which live exclusively in seas from the lower Palaeozoic era. The majority of them have solid external calcerous, horny or soft skeletons. The author describes corals in detail from a morphological, anatomical and physiological point of view and devotes special attention to those corals which form reefs. He also describes their ecological requirements, the communities they form and the eco-systems which are formed in reefs. Recently it has been found that the starfish Acanthaster planci is destroying reefs; this starfish has poisonous spines and previously it hunted bivalves, but now consumes reef-forming corals. Luckily natural enemies of these starfish have been discovered (fish and crustaceans). At present underwater reservations are being founded to conserve coral reefs; the first of these was created in Florida in 1960 - the Pennekamps Coral Reef. From the point of view of geography, corals should be explained in the context of atolls and barrier reefs. The creation of atolls is still explained by the theory first formulated by Charles Darwin. But the creation of the Maldive Islands is better explained by the newer theories of the marine scientist Hans Haas.

geography - geomorphology - physical geography - zoology - islands - Czechoslovakia. 147755.

333. SOCHOR, R.:
El-Ouedu
Země a lidé, 31, 1982, No. 8, pp. 359-362.
5 photos, 2 maps.

The Sahara is the largest desert in the world. It is mostly rocky and it has rocky mountain peaks. The highest mountain range is Hoggar. The sandy part of the desert is called egr. The author describes a trip he made from Biskra to El-Ouedu, an oasis in the typical environment formed by the Great Eastern Erg, as well as the nature of the Sahara and the life of the people in this desert.

geography - geomorphology - socio-economic geography - desert - Sahara - Czechoslovakia. 147755.

334. STÁRKA, V.:
Kyffhäuser
Lidé a země, 31, 1982, No. 8, pp. 370-373.
4 photos, 2 maps.

To the south of the Harz Mountains in central Germany there is 12 kilometer long mountain range of similar geographical and morphological characteristics as the Harz, called Kyffhäuser. The history, archeology and nature of the range are very interesting. On its northern slopes crystalline substrate rocks come to the surface (including granites, diorites and amphibolites), while the summits of the highest hills are Carboniferous desiments (conglomerates, sandstones and slate); the southern part of the mountains have Permian layers of "zechstein" with deposits of adhydrite, gypsum and copper slates. Anhydrite and its water enriched form of gypsum are connected with karst phenomena, which the author studied and here describes. No gypsum karst formations exist in Czechoslovakia.

geography - physical geography - geomorphology - karst - gypsum - GDR - Czechoslovakia. 147753.

335. STEINMÜLLER, A.:
Die Flussterassen und die Klimastratigraphie des Pleistozäns
(Fluvial terraces and the climate stratigraphy of the Pleistocene)
Petermanns Geographische Mitteilungen, 126, 1982, No. 2, pp. 113-118. Lit. 90.

The article describes the climate in the Pleistocene era and methods of studying it. While palaenthology provides a number of clues, its findings sometimes bring contradictory evidence. The study of fluvial terraces is very important for determining the Pleistocene climate, as well as the gravel layers created in a cooler period. Such studies have greatly extended our knowledge of the era.

geography - geology - hydrography - continental glaciation - Pleistocene - GDR. 147755.

336. SCHMIDT, R.:
Die Struktur der Bodendecke der Grundmorönengebiete der DDR
(The structure of soil covers on the basic territory of glacial drift (moraine) in the GDR)
Petermanns geographische Mitteilungen, 126, No. 3, pp. 153-170.

The structure of the soil cover in the GDR on territories covered by underground glacial drift is strongly dependent upon Pleistocene sedimentation, perglacial changes, the relief and water relief of the landscape. In order to explain the origin of the landscape cover, as well as anthropogenic changes and the heterogenity of the soil cover, research and analysis on a scale of 1 : 1000 have been carried out. The outcome of this detailed study has been generalised on the basis of local agricultural maps using a medium scale of 1 : 100 000 for the whole lowland territory of the GDR. This work is important for the planning of the water economy and landscape conservation.

geography - geology - physical geography - glaciology - continental glaciation - GDR. 147755.

15.3 Socio-economic geography

337. BAUERSACHS, F.:
Regionale Auswirkungen veränderter Agrarpolitik
(Regional impacts of changes in agricultural policy)
Geographische Rundschau, 34, 1982, No. 3, pp. 96-101
4 figs., 2 tabs.

As a consequence of growing agricultural productivity and large surpluses of agricultural products which are accumulating, the countries of the European Economic Community are now discussing changes in agricultural policy. The main problem is the extent to which an agricultural policy and price policy can actually decrease surplus production while at the same time striving towards doing away with them completely. The author analyses in detail the existing situation in the European Community and the effect that price changes and changes in agricultural market policy would have on the farmers in the Federal Republic. All aspects of farm policy are discussed, including the problem of its labour force and the feasibility of their transfer elsewhere.

geography - socio-economic geography - agriculture - regional geography - FRG. 147759.

338. BENDA, A.:
Stavba XX. století (The project of the XXth century)
Lidé a země, 31, 1982, No. 12, pp. 545-548.
5 photos, 1 map.

The Baikal-Amur railway (called BAM in Russian) is one of the longest railways in the world (3415 km): Its goes from Tashkent to the port of Sovetskaya Gavan.

This new project carries on the previously built sections from Tayshet - Ust-Kut and Komsomolsk on the Amur to Sovetskaya Gavan. Between Ust-Kut and Komsomolsk, 38 stations will be built. At Tynda BAM is connected to the Trans-Siberian Railway. At Chulman the railway will connect to Iakutsk and Chukotka. The author has visited BAM three times. Tunnels are stil being built, as well as railway stations and depots. So far the railway has only a single track, while a second track is being built and the electrification of the whole railway is being prepared. Besides the track itself a total of 3 700 various objects are being built, including stations. A total of 120 towns and villages are being built along the right of way. BAM will make it possible to exploit the resources and richness of the Siberian interior.

geography - socio-economic geography - transporation
geography - USSR - Czechoslovakia. 147757.

339. BLOCH, D.:
Die Grosstädte Italiens und die Problematik von Verwaltungseinheit und Siedlung (Large cities in Italy and the problem of unity between administrations and settlements)
Petermanns geographische Mitteilungen, 126, 1983, No. 3
pp. 201-203, 1 fig., 1 tab.

The author analyses statistical sources and describes the difficulties in determining the borders of large cities, areas which should be included into an urban area and determining the number of inhabitants in a specific town or city. A table indicated Italian towns of 100 000 inhabitants and more, their area in square kilometers, number of inhabitants on October 24th, 1971 and the number of inhabitants living within the town and on independent housing estates. Data for Rome, Naples and Turin are analysed separately, from the point of view of population density and equitable representation in elections.

geography - socio-economic geography - settlement geography - size of settlements - regional geography + Italy - GDR. 147759.

340. BONIFATEVA, L.I. - GAFAROV, G.A.:
Ekonomicheskoye sotrudnichestvo Sovetskogo soyuza i Indii
(Economic cooperation between the Soviet Union and India)
Geografiya v shkole, 49, 1982, No. 1, pp. 16-19.

Good relations between the Soviet Union and India have been developing in a positive manner for decades. Since the first period of transition in 1953 trade turnover had increased 140 times. Among the developing countries India holds first place among the Soviet Union's trading partners. Until the middle of the seventies the USSR exported mostly machines, installations and vehicles to India. But with the development of India's own industry the structure of Soviet exports is changing and now the major part of Soviet exports are fuels. India's export to the USSR includes traditional food stuffs (coffee, tea, spices) as well as products of consumer manufacturing, such as cotton and jute textiles, shoes and leatherware. Gradually also products of the heavy industry are being exported to the USSR, such as steel, machines and instruments. The aid provided by the USSR in building industrial complexes is also very important and includes projects in the metallurgical, machine building, electrical technology and petroleum industries as well as in light industry, the production of medical supplies and agriculture. Also cooperation in scientific and technological development and in education has been important.

geography - socio-economic geography - foreign trade - USSR + India - industrial branches - USSR. 147757.

341. BOHDSCHECK, B.:
Die marokkanische Landwirtschaft als Beispiel eines problemsektors in einem orientalischen Entwicklungsland, dargestellt am Khammesat. Eine Unterrichtsreihe mit Spielszene für die Sekundarstufe I. (Agriculture in Morocco as an example of a problem sector in an oriental developing country, on the basis of the example of Khammesat. A teaching series with play acting for the lower classes of secondary school)
Geographie im Unterricht, 7, 1982, No. 11, pp. 425-434, Lit. 12.
4 figs., 1 text, 1 play for pupils

The extensive modernisation of Moroccan agriculture has been hindered and made much more difficult because of traditional agrarian relations which continue to exist. A specific form of land tenure called Khammesat, with its specific form of rent is actually a remnant of pre-Islamic times. An influencial class of land owners (Sheiks) is successfully blocking all strivings for change. On the basis of three one-act plays, pupils act out and demonstrate the ihhuman conditions which this type of land tenure creates. The article also provides information on the history of Morocco, the political changes which have occured there and the strivings of the country for modernisation. At present Morocco has 30 water dams which the government is using to implement its modern agrarian policy.

geography - socio-economic geography - agriculture - regional geography + Morocco - FRG. 147713.

342. BORSDORF, A.:
Die lateinamerikanische Grosstadt (Cities in Latin America)
Geographische Rundschau, 34, 1982, No. 11, pp. 498-501.
1 fig.

During the recent decade studies of Latin American cities have greatly increased. The large quantity and good quality of these studies have led to the creation of models, one called "A Global Outline of Latin American Cities" by Bähr and another called "An Outline of the Structure of a Chilean City", by Borsdorf. The author of the latter here discusses both models, compares their most important characteristics and provides information on further studies in this area carried out by Mertens (in 1980) and Gorunsen (in 1981). On the basis of a synthesis of the work of these authors the author describes his own new model, which is indicated graphically and commented upon.

geography - socio-economic geography - settlement geography - cities - regional geography + Latin America - FRG. 147713.

343. BARTZEL, P. - MÜLLER, H.:
Sozioökonomische Raumstrukturen in der EG (Socio-economic spatial structures in the EEC)
Geographische Rundschau, 34, 1982, No. 4, pp. 164-177.
Lit. 11, 1 fig., 3 tabs., 5 maps.

The integration of Europe can be accomplished only if the same living and working conditions are achieved in all its parts and when regional disparity will really be overcome. The authors cite examples of the regionalization of various countries at the spatial level, in relation to the development opportunities and abilities of individual countries. They use various theoretical approaches to this problem (by Clark, Hoover, Fourastier) and point to the sectoral growth and structural changes which have occured in economic dominance in the primary, secondary and tertiary sectors. Various areas and countries of the EEC have achieved various degrees of development. Sectoral polarisation (Perroux) indicates that sectoral growth occurs irregularly, since not all sectors develop evenly, and growth dominates only some of them. Regional polarisation (Myrdal) indicates how economic market conditions control changes in the area of determining factors which in themselves strengthen the growth process and lead to a differentiation between the centre and the periphery, in other words towards the underdevelopment of some partial areas. Indicators of structure include the number and changes (migration) of the population, education, health care, living standards, income and quality of living.

geography - socio-economic geography - EEC - European integration - regional geography - FRG. 147759.

344. CLOSS, H.M. - GAFFGA, P.:
Materialen zur Entwicklungsländerproblematik II.
(Materials concerning the problem of developing countries - part II)
Geographie im Unterricht, 7, 1982, No. 8, pp. 325-327.
4 tabs., 2 figs.

Studying world population trends is one of the tasks of UNESCO. In 1981 UNESCO published a report on this subject and again stressed the need to limit the birth-rate, especially in the developing countries. Since 1950 the population of Central and South America, as well as Africa has doubled, while in the developed industrial countries population growth is much slower. In 1979 73 % of the world's population lived in the developing countries. According to various forecasts by the year 2110 the world will have 10 billion people and 9 out of every 10 people will live in the developing countries. Tables in the article demonstrate population growth in the world according to these forecasts. The article also points to the problem of refugees, which especially in Africa is very serious. In 1980 there were 4 and half million refugees in the world who had left their native land for political, religious and economic reasons. Also population movements are discussed among various countries and areas in Africa.

geography - socio-economic geography - regional geography - developing countries - population geography - UNESCO - FRG. 147711.

345. CLOSS, H.M. - GAFFGA, P.:
Materialen zur Entwicklungsländerproblematik - III.
(Materials concerning the problems of developing countries - part III)
Geographie im Unterricht, 7, 1982, No. 10, pp. 407-413.
10 tabs., 6 figs., 3 texts.

Since 1970 the volume of world trade continues to increase; its turnover in 1978 was equal to 1.3 billion US dollars annually. The industrial countries have a 60 % share in this trade, the developing countries without OPEC around 13 %, and the socialist countries 10 %. The tables show the development of world trade according to this classification of countries and also cites the per capita gross national product, world agricultural output and manufacturing output, the production and consumption of petroleum, the development of petroleum prices since 1973 and the production of cereal in 1980.

geography - socio-economic geography - the geography of foreign trade - output + agriculture - output + industry - FRG. 147711.

346. CLOSS, H.M. - GAFFGA, P.:
Materialen zur Entwicklungsländerproblematik - I.
(Materials concerning the developing countries - part I.)
Geographie im Unterricht, 7, 1982, No. 6, pp. 250-252.
5 tabs.

The article provides fundamental data concerning the developing countries. The tables are intended for the use of pupils in the preparation of assignment and in classwork. They contain data on the per capita gross national product in US dollars in 1978 in individual African countries. Among the poorest countries are Ethiopia, Burundi, the Cape Verde Islands, Comores, Malawi, Mali, Mozambique, Upper Volta, Ruanda, Somalia and Chad with a per capita GNP from 0 to 200 dollars annually . Among the richest countries in Africa are Algeria, Namibia, the Seychelles, the Union of South Africa (with annual per capita GNP in US dollars from 1000 - 1500) and Gabun, Lybia and Reunion (with 3000 dollars and more). Other tables deal with the share of economically active inhabitants in the total population in 1979, with the number of inhabitants per square kilometer of arable land, basic structural data and data on the infrastructure on the basis of regional examples.

geography - socio-economic geography - developing countries - GNP - FRG. 147711.

347. DANIEL, E.A.:
Nineteenth Century Townscapes of Eastern Mexico
The Geographic Review, 72, 1982, No. 1, pp. 1-19.
11 figs.

The author here concentrates on four towns in eastern Mexico: Veracruz, Jalapa, Orizaba and Puebla, which in the 19th century all played an important role in the life of the country. Puebla and Orizaba were the most populous towns of eastern Mexico due to their developed manufacturing, which was first based on handicrafts and later on machine industry. Jalapa was a colletion point for goods on their way to the port of Veracruz. Manufacturing and commerce were the specific characteristics of all four towns in which the colonial heritage of the Spanish era can still be seen today. The article contains pictures from the last century, as well as aerial photographs which very well show the original fortifications and walls of the towns and at the same time show urban development patterns and planning evolved in the 19th century.

geography - socio-economic geography - settlement geography - towns - regional geography + Mexico - urban planning - 19th century - USA. 147759.

348. DANEL, M.:
Cesty Černé smrti (The impact of the Black Death).
Země a lidé, 31, 1982, No. 8, pp. 354-358.
4 photos, 1 map.

The plague (pestis) is the most lethal bacterial disease. It is carried by wild rodents living in the steppe or semidesert. In man it has the form of the bubonic plague, named according to buboes - or swollen lymph nodes, or the less frequent pneumonic plague where blood is coughed up. The primary form of plague infection enters the human body when it is bitten by the Plague flea (Xenopsylla cheopis) and the latter form by aerial infection in direct contact with a patient or as a secondary infection of the bubonic plague. Prevention is possible by vaccination and the disease can be successfully treated by anti-biotics. In human settlements the carriers of the plague are the hosts of the Plague flea - plague rats. The lands of its origin are the steppe and desert in central Asia and also in the North American prairie. The author brifly describes the history and geography of the plague. The first known epidemic occured in Byzantine times under the emperor Justinianus (542 a.d.) which lasted for almost half a century and killed one hundred million people. Another large scale epidemic occured in medieval times in Europe where it was brought by the Crusaders. In Europe the plague killed off about one fourth of the population in a world of 75 million people. In Europe the plague receded definitly in the 18th and 19th centuries. The last time it occured in Bohemia was in 1820. Human foci of the disease receded when the Brown rat (Rattus norvegicus) began to replace the Common rat (Rattus rattus); the former is less sensitive to the plague and thus the last European focus of the disease in the steppes of southern Russian were exterminated. The most recent case of the plague appearing in Europe from an outside source was in France in 1970. In Asia the struggle with the plague continues. Also in equatorial Africa and southern Africa the plague still exists. In North America the last case was registered in 1898 when it was introduced probably by rats in San Francisco. In South America it can still be found. Only Australia has so far never had a case of the plague.

geography - socio-economic geography - infectious diseases - the plague - Czechoslovakia. 147757.

349. DZIKOWSKA-ZAWIRSKA, J.:
Handel zagraniczny polski (Polish foreign trade)
Geografia w szkole, 35, 1982, No. 1, pp. 57-62.
7 tabs.

The author deals with Polish foreign trade on the basis of statistics for the year 1981 and compares them with the period from 1960 to 1980. In 1946 the turnover of Polish foreign trade was equal to 3 million foreign trade Złotych and in 1980 it was 9 million foreign trade złotych. In 1946 the socialist countries had a 70 % share in Polish foreign trade and by 1980 this figure had dropped to 55 %. In 1960 the developing countries had a 7.1 % share and in 1980, 9.5 %, while the capitalist countries in 1946 represented 30 % of Polish foreign trade and in 1980, 35 %. Imports from the capitalist countries increased, as well as exports to these countries. Still, Polish trade with the socialist countries continues to be the most important (especially trade with the Soviet Union from where raw materials needed by Polish manufacturing are imported). The article constains tables of imports and exports to and from the members of the Council for Mutual Economic Assistance in 1979, as well as the volume of imports and exports to and from the USSR, Czechoslovakia, GDR, FRG and the USA in 1978. Poland imports petroleum primarily from the Soviet Union (80 %), as well as iron ore (78 %), cotton (73 %) and natural gas (10 %).

geography - socio-economic geography - foreign trade - regional geography + Poland - Poland. 147757.

330. ENYEDI, G.:

Der Einfluss der modernen Landwirtschaft auf die rurale Siedlungsstruktur in Ungarn (The influence of modern agriculture on the rural settlement structure of Hungary) Petermanns Geographische Mitteilungen, 126, 1982, No. 1, pp. 1 - 4. Lit. 17.

The development of rural settlement structures in Hungary has become a subject of interest because 49 % of the inhabitants of Hungary still live in rural areas, as well as almost half the labour force. Rural areas are very important for the production of food, they have a sizable agricultural industry and also from the point of view of tourism rural areas are important. 42 % of the economically active population of rural areas are employed in cooperatives and state farms, the remainder are employed in non-agricultural occupations. Farming is mostly done on large plots of land and hence new relations between various villages are being formed. Modern agriculture is becoming a progressive factor in the development of settlements, but the building of new settlements is not sufficiently coordinated with the development of agriculture and this leads to certain tensions between both. Until the middle of the 20th century the old structure of villages and their building patterns and style were maintained. But since then, among others due to the development of the communication network, very rapid changes have taken place in their social, as well as economic patterns. Due to the contemporary rapid social transformation of rural areas at present, settlements often are no longer adequate to the requirements of modern agriculture. Integration is taking place in agriculture as well and its basic requirements are changing. A new model of socialism is being created in villages.

geography - socio-economic geography - settlement geography - agricultural production - regional geography + Hungary - GDR. 147759.

351. ELSASSER, H. - LEIBUNDGUT, H.:
Touristische Monostrukturen - Probleme im Schweizerischen Berggebiet (Tourist monostructures - problems in the mountain areas of Switzerland)
Geographisches Rundschau, 34, 1982, No. 5, pp. 229-234.
2 photos, 2 tabs., 1 map.

Geography has often described the dependence of a specific area upon a specific branch of industry or agriculture. The term monoculture is used in agriculture, forestry and even in industry. It deals with a situation where one type of activity or product dominates all others. In Switzerland there are several "monocultures": the watch-making industry in Jura, textiles in eastern Switzerland. This term can also be used in the context of settlement and social geography. For instance due to the very rapid development of tourism, foreign travel and winter sports in the Swiss Alps, we are dealing with a tourist "monoculture". The economic development of a number of Swiss regions is increasingly dependent upon foreign tourists. Pressing regional problems arise concerning this fact; whether this is in accord with the interests of the population, whether there is a sufficient supply of labour and localities, etc. In some part of Switzerland employment connected with tourism is 25 % and for instance in Oberland-Ost it is 30 % and in parts of the Jungfrau region or in Gemeinde Grindelwand up to 45 %. In planning the development of such regions and in implementing a regional policy, the negative influence of foreign tourism should be taken into account and when possible prevented and the development of supplementary industries or crafts developed.

geography - socio-economic geography - tourism - regional geography + Switzerland - GDR. 147757.

352. FEDINA, A.E.:
Ismenenie prirodi Predkavkazya deyatelnostju cheloveka
(The transformation of nature in the Caucasian foothills due to the influence of man).
Geografiya v shkole, 49, 1982, No. 1, pp. 14-15.

In teaching the physical geography of the USSR attention should also be paid to anthropogenic changes which are occuring in nature, on the basis of specific data. The author demonstrates how to carry out this task from a didactical point of view on the basis of the area which covers the Caucasian foothills. Since virgin land has been turned into arable land, the building of irrigation canals, the partial draining of swamps and the deltas of large rivers, nature has become more productive. But the influence of industry, the building of power stations and the urban development connected with them have led to far reaching anthropogenic changes in nature; some of them are of a positive nature, while others are negative. These changes include changes in the flora, soil composition and water regimen of the area. Pupils should be shown both the positive and negative consequences of human intervention in nature.

geography - regional geography - physical geography - Caucasian foothills - agriculture - USSR. 147757.

353. PIERLA, I.:
Zmiany w zużyciu surowców energetycznych w europejskich krajak kapitalistycznych (Changes in the consumption of energy raw materials in the European capitalist countries)
Geografia w szkole, 35, 1982, No. 5, pp. 211-217.
3 tabs.

The majority of the countries in Western Europe are among the developed industrial countries, with a large consumption of energy producing raw materials. Recently, strivings to decrease the costs of production and to better utilize all energy sources, especially primary fuels when they are transformed into other forms of energy, as well as improved technologies and energy saving measures have brought positive results. While in 1960, 860 kg of coke were required for the production of iron from one ton of iron ore, in 1982 this figure declined to only 500 kg. Since 1950 petroleum was gradually replacing brown coal and anthracite because the price of petroleum was 1.5 times smaller than that of anthracite and besides that petroleum is twice as valuable from a calory point of view. The following key is now used to calculate relations between various types of fuel: 1 ton of brown coal = 0.3 tons of anthracite. 1 ton of petroleum = 1.47 tons of anthracite. 1000 m^3 of natural gas = 1.33 tons of anthracite, 1000 kWh of electrical energy from a nuclear power plant = 0.123 tons of anthracite. The extraction of anthracite is declining, mines are being closed in Great Britain and in the Federal Republic. In 1972 the energy crisis began, and the export of petroleum from the Arab countries of the Middle East and Africa decreased. OPEC was formed and strived to create a uniform petroleum price. Since then the prices of petroleum increased steeply. At the same time, however, petroleum extraction was begun in the North Sea, as well as the extraction of natural gas, whose largest producer in Western Europe are the Netherlands (80 billion m^3 annually) while Norway is the second largest with 25 billion cubic meters, and Britain is in third place with 10 billion cubic meters annually. The output of electrical energy by nuclear power stations is also increasing. In 1977 Belgium produced 25 % of its electrical energy requirements in nuclear power stations; in Sweden the figure was 22 %. Gradually the extraction of petroleum is declining; for instance France in 1979 used 106 million tons of petroleum, in 1980 only 98.6 million tons and in 1981, 88 million tons. Also petroleum is being extracted in new fields throughout the world (Alaska, Mexico, Brazil, Peru). The demand for natural gas is also increasing and new gas pipe lines are being built (for instance from the USSR to the GDR). Also electric power stations run on natural gas are being built.

geography - socio-economic geography - energy production - capitalist countries - regional geography + Europe - petroleum + natural gas + coal extraction - Poland. 147757.

354. FREYKIN, Z.G.:
Pustyni i sovetskiy opit ikh osvoeniya (Deserts and Soviet experiences with their control)
Geografiya v shkole, 49, 1982, No. 2, pp. 20-24.

The author provides a description of the desert: sparse settlements, movable sand reliefs, strong winds, Some deserts are suitable for cattle grazing and some sections for agriculture with irrigation. A characteristic aspect of deserts is the fact that natural processes occur in them, but under extreme conditions. Even a small change in various components of the environment can disturb the equilibrium achieved under natural conditions and this may have negative consequences. Soviet experiences with cultivating the desert are based on scientific research, which has produced maps, studies, scientific expeditions and the building of research stations, as well as the creation of natural reservations. The most important factor is water - the utilization of subterranean waters, the construction of canals and aquaducts, building a new network of wells for cattle, as well as artesian wells. All this makes it possible in the USSR to irrigate pastures and to carry out soil improvement work, to make use of agricultural technology, to modernize transportation and even to develop heavy industry.

physical geography - desert - plants - USSR. 147757.

355. FURUSETH, O.J.:
Agricultural land conversion: background and issues
Journal of Geography, 81, 1982, No. 3, pp. 84-93.
2 figs., 3 tabs.

After World War II the USA became the most important agricultural producer of the world. This is not only because its has an abundance of land, experienced farmers and good mechanisation, but also because effective aid on the part of government and private organizations has been and continues to be provided. The author analyses and describes these activities and acquaints readers with the scope and changes which have occured in the amount of agricultural land in various parts of the US, its transformation into construction sites and other uses. The author also cites the criticism voiced by scientists and nature conservationists concerning the need for environmental conservation and the negative effects of diminishing amounts of soil devoted to agriculture and the increasing intensification of soil use which often has negative effects. Measures taken by the Federal government concerning the future further development of agriculture, already now assume that the number of farmers will continue to decline, while the size of farms will continue to increase so that further concentration of production will take place.

geography - socio-economic geography - agricultural output - soil - environmental conservation - USA. 147763.

356. GANSER, K.:

Eine ökonomische und ökologische Perspektive für die Agrarpolitik (The economic and ecological outlooks for agricultural policy)
Geographische Rundschau, 34, 1982, No. 3, pp. 82-87.
5 figs., 2 tabs.

The agricultural policy of the Federal Republic of Germany is now entering a crisis period. Frequent protest demonstrations of farmers and the destruction of agricultural surpluses provide proof of this. The author discusses ecology on the basis of the current agricultural economy and points out that economic and ecological requirements are not always identical; as a matter of fact in a number of cases they stand in sharp conflict with each other. The author points out that from an ecological point of view the intensification of agriculture through the increased use of chemicals not only destroys subterranean waters, but also affects the final products of agriculture, including fruits and vegetables. For improving the current situation in agriculture the author suggests setting out in new directions which he calls "unusual". Among them are the strict inspection of production costs, a critical approach to mechanization, especially when it is highly productive and not suitable for small parcels of land. Angricultural products should be sold when possible without "middlemen", which iecrease profits. The processing of agricultural products should be done within the agricultural sector and extended only there. Cooperation between farmers should increase for the purpose of plant and animal breeding and the processing of products. The author's comments on the work done by farmers and their attitude towards mechanization, which to a certain extent makes work on farms more monotonous and indirectly pushes farmers into the arms of a consumer society, are very interesting.

geography - socio-economic geography - agricultural output - regional geography - FRG. 147757.

357. GERLACH, E.:
Zu einigen Fragen der Energiewirtschaft der Entwicklungsländer (On some individual problems of the energy economy in the developing countries)
Zeitschrift für Erdkundeunterricht, 34, 1982, No. 11,
pp. 434-446.
4 tabs.

The recession in the capitalist countries and hence the decline in the demand for petroleum in the industry of these countries in 1981 led to extensive decreases in world petroleum output. The 13 OPEC members have suffered substantial losses. A decrease in demand and the resulting decline in incomes have had a negative effect on the general economic situation of OPEC members. Another regional aspect of this situation is its negative effect on the long-term plans of these countries. The article deals in detail with the causes of this crisis and its impact on the producers of primary energy, as well as the current aspects of the world energy crisis. The author provides summary tables from various sources which illustrate the situation in individual OPEC countries.

geography - socio-economic geography - energy production - regional geography - developing countries - OPEC - GDR.
147757.

358. GRIMM, F.:
Tendenzen und Probleme der Urbanisierung (Trends and problems in urban development)
Zeitschrift für den Erdkundeunterricht, 34, 1982, No. 8-9.
pp. 311-326, 4 figs., 7 tabs.

In the autumn in Rome a conference was convened, on the basis of the initiative of the United Nations, of 60 mayors of towns and cities, which according to forecasts will have 5 million or more inhabitants by the year 2000. The purpose of the conference was to discuss problems connected with this development. The number of cities with over a million inhabitants is constantly rising. The most marked symptom of world urban development is the huge growth of large cities in the developing countries. Such a high degree of urban development leads to socio-economic problems and to marked differences in urban development in the capitalist and socialist countries. The author uses extensive source material and data, also from the last century and critically assesses this interesting but not always positive development.

geography - socio-economic geography - settlement geography - large cities - urban development - GDR. 147757.

359. HALLER, A.O.:

A socio-economic regionalisation of Brazil

Geography Review, 72, 1982, No. 4, pp. 450-464.

6 figs., 2 tabs.

Brazil is a very large country with extreme differences in socio-economic conditions and in the density of inhabitants. The author describes and comments the long history of government planning in this country, whose objective has been the achievement of economic equilibrium and overcoming differences between extreme poverty and poor living conditions on one hand and extreme riches on the other. Sometimes drastic measures have been taken to overcome these differences. An important obstacle to these plans are the natural conditions of the country with its great differences in climate and soil, with its almost empty areas together with high population density elsewhere. After various recent changes, Brazil is now divided into 23 states, 2 territories and a federal district, with the capital Brazilia, which is still under construction and which must still compete for primacy with Rio de Janierio.

geography - socio-economic geography - regional geography + developing country - Brazil - geography of population - density of population - USA. 147759.

360. HEIDE, U.:
Interdependenz von Aussenhandel, Wachstum, Sektoral- und Regionalstruktur (The interdependence of foreign trade, growth and the structure of sectors and regions)
Geographische Rundschau, 34, 1982, No. 2, pp. 42-48.
5 figs., 1 tab.

Foreign trade has a stabilizing effect on the economy and also directly effects the movement and branch structure of output. The author demonstrates why the political and economic foundations of foreign trade should take into account the branch and regional structure of the economy. The author analyses the development of these aspects during the last several years and discusses the status of the Federal Republic within the context of the world economy. He compares exports and imports and explains their relation towards the balance of payments and position of the Federal Republic in the context of the international division of labour, as well as its future outlooks.

geography - socio-economic geography - foreign trade - FRG. 147757.

361. HOFFMEISTER, B.:
Die Stadtstruktur im interkulturellen Vergleich
(The structure of the city in an intercultural comparison)
Geographische Rundschau, 34, 1982, No. 1, pp. 482-488.
2 figs., 1 tab.

Problems concerning the position, development, morphology and function of urban housing estates have been a subject of interest for geography since the period following World War I. But it was only in the sixties that an intensive study of small, medium and large towns and cities was begun. The author sums up the findings of numerous studies from various countries and describes the most important forces influencing the structure of towns and cities. He also discusses the methodology of studying urban structures and their development. Socialist towns are a new phenomenon, especially those which have been newly founded and whose socio-political ideas concerning architecture and urban planning, concern for instance parks of culture and leisure-time activities or houses of culture.

geography - socio-economic geography - geography of settlements - towns and cities - regional studies. -. FRG. 147757.

362. **KHRUSHCHEV. A.T.:**
Shestidesyatiletiye strukturi i teritorialnoy organizatsii narodnogo khozyastva strani (Sixty years of the Soviet Union: Perfecting the structure and territorial organization of the national economy). Geografiya v shkole, 49, 1982, No. 6, pp. 7-15. 5 tabs.

During the last sixty years the Soviet Union has undergone far-reaching changes, which have had an essential impact upon the structure and territorial organization of the whole country. The USSR has become a developed industrial country with highly mechanized agriculture. The present period of developed socialism in the USSR represents a mighty economic, scientific and technological potential, with the necessary natural, material, and labour resources. The USSR makes a substantial contribution to world industrial output. The new stage of development of national economic complexes depends upon intensification, increased efficiency and improved qualitative indicators. Typical for the present period is a comprehensive approach combined with endeavours to develop input-output relations in a optimum manner. The USSR is intensively building junction, regional and inter-regional production infrastructures, which include for instance railways, highways, water works, gas and oil pipelines as well as the electrical power grid. The social infrastructure includes urban transport, telecommunications, radio and TV transmitters, etc.

geography - socio-economic geography - 60th anniversary + USSR - economics + USSR - USSR. 147757.

363. JANKOVEC, M.:

Demografický vývoj Vietnamské socialistické republiky
(The demographic development of the Vietnamese Socialist Republic)
Lidé a země, 31, 1982, No.11, pp. 525-526.

Vietnam is undergoing very rapid population growth; since independence was declared in 1956 until the end of 1980 the number of inhabitants has increased 2.3 times. The Vietnamese Peoples Democratic Republic was created in 1976. At that time the country has 49 160 000 inhabitants; by 1980 it already had 53 722 000 inhabitants. In 1980 48.4 % of the population lived in rural areas and 51.6 % in urban areas. The Vietnamese are planning to reduce natural population increments to 1.7 %.

geography - socio-economic sphere - population - geography + Vietnam - Czechoslovakia. 147757.

364. JOHNSTON, M.:
High Tech, High Risk and High Life in Silicon Valley
National Geographic, 162, 1982, No. 4, pp. 458-477.

The author describes the early development and existing situation in Silicone Valley and Santa Clara, two centres which are competing for primacy in the most modern field of technology - the building of computers and their components. The products from both places are important both for the development of science and technology, as well as for military purposes.

geography - industrial geography - USA. 147757.

365. KAPITONOV, E.J.:
Agropromishlenniy kompleks SSSR i prodovolstvennaya programa (The agricultural-industrial complex of the USSR and the food program)
Geografiya v shkole, 49, 1982, No. 6, pp. 16-21.

In the 11th five-year plan the focus of attention is on increasing agricultural production with the purpose of improving the amount of food available to the population. The economy of the USSR represents a single economic complex which is functional only on the basis of a complex system of input-output relations and territorial relations. An important aspect of agricultural production is its integration into the economy as a whole. For this reason stress is now being placed on an agro-industrial complex. Among the industries in this complex are those that provide agriculture with its means of production and assure that technological progress is implemented. They include for instance the production of agricultural machines, microbiological products, the production of fertilizers and other chemicals, etc. Another group is formed by agricultural enterprises themselves. A third group provides various forms of transportation, storage and the processing of agricultural products. A special group within the agro-industrial complex is its infrastructure which provides the servicing of agricultural facilities, as well as the social and cultural needs of those who work in agriculture. This complex will contribute to gradually transforming agriculture into an industry, where intensification and concentration will be more rapid.

didactics of geography - geography - instruction + geography - socio-economic geography - economics + USSR - agriculture - food processing - USSR. 147757.

366 KESSLER, H.:
Kulturlandschaftswandel im Gebiet der Nordalpinen Höhenstufewirtschaft. Modelhafte Synthese einzelner Forschungsergebnisse. (Changes in the cultural landscape in northern Alpine areas where farming is carried on high in the mountains. A model synthesis of individual findings of a study)
Geographische Rundschau, 34, 1982, No. 5, pp. 236-242
6 figs.

Since the fifties we can observe extensive changes in the way that farming is carried out in the whole Alpine area. This process is of various intensity in various places, but is becoming increasingly evident. The author explains its causes: the hard life connected with making a living at the very edges of the human community is subject to the laws of competition with the more prosperous farms found at lower altitudes. This leads to a drain on young members of the labour force, causing a change in the age structure of the population of those working at higher altitudes. The question is how long can farming at higher altitudes continue. Urbanization is leading to the depopulation of the mountains, but also to the increased attractiveness of the mountains for these living in urban areas, who like to return there as tourists during their vacations. This leads to an increased demand for mountain chalets and places to spend vacations. The author discusses the problems connected with this transformation on the basis of the example of one farm high in the mountains.

geography - socio-economic geography - agricultural production - mountains + Alps - tourism - FGR. 147757.

367. KOLARS, J.:
Earthquake - Vulnerable Populations in Modern Turkey
The Geographical Review, 72, 1982, No. 1, pp. 20-35.
10 figs.

Earthquakes are a normal part of the geological process and many landscapes with earthquakes have substantial shares of the population living in them. But people in such areas have learnt to understand the symptoms which precede earthquakes and to take the necessary measures to prevent extensive damage. There are four different strategies to prevent a disaster, which depend on the density of settlements in the given area, the number of inhabitants, the telecommunication network available and also the specific aspects of the landscape. In Turkey, 95 % of the population lives in areas threatened by earthquakes. The author provides a table of the largest of them from 1933 to 1976 and various interesting information about them.

geography - geology - physical geography - regional geography - Turkey - population - earthquake - USA.
147755.

368. KOLOSOV, V.A.:
Rim (Rome)
Geographiya v shkole, 49, 1982, No. 4, pp. 16-20.
1 fig.

After Rome was made the capital of a unified Italian kingdom in 1871 its role as a transportation crossroads and cultural and political centre have greatly increased. The prerequisites for the development of industry were created and the number of inhabitants rapidly increased. The article devotes attention to the post-war history of the city, its social and economic development, its advantageous location from the point of view of world transportation networks, existing political conditions in the city and its different districts and sections and their importance. A map of the city is provided which shows the most important historical monuments and buildings, housing estates, industrial zones, the University, etc.

geography - didactics of geography - geography instruction - socio-economic geography - settlement geography - Rome - USSR. 147757.

369. KRUTIKOV, V.L. - MACHLIN, E.M.:
Rechnoy transport v edinoy transportnoy sisteme SSSR
(River transport and the unified transportation system of the USSR)
Geografiya v shkole, 49, 1982, No. 5, pp. 6-10.

According to the resolution of the XXVIth Congress of the Communist Party of the Soviet Union, a long-term plan for the development of transportation networks is now being prepared. This Congress resolution should be a topic for teaching economic geography. The authors first explain the specific aspects of river transport even in an age of space travel. While it is true that river transport is slow, it is at the same time very economical from an energy point of view, which makes it possible to transport heavy objects for long distances. Thus the natural network of rivers is being supplemented by a network of canals and reservoirs. In class, pupils become acquainted with the network of waterways in the USSR and with the main rivers of the eastern and western parts of the USSR. As far as the volume of good transported by riverboats is concerned, western Siberia is most important. Its largest river, the Ob with its tributaries, is an important route for the transport of timber from the forests of Siberia. The network of railways, as well as roads and airplane routes to a great extent supplement the river network and all together they form a single transportation system, which is being continually extended and improved.

geography - socio-economic geography - transportation geography - inland river transport - USSR. 147757.

370. LAMPE, K.:
Bewässerungslandwirtschaft in der Dritten Welt
(Irrigation farming in third world countries)
Geographische Rundschau, 34, 1982, No.12, pp. 538-544.
4 figs.,3 tabs.

Since 1950 worldwide irrigation has more than doubled. At present irrigated land represents 10 % of all agricultural land; by 1990 it should represent approximately 22 million hectars and another 45 million hectars are to be put to use as the outcome of land reclamation. The building of large dams and other water works aims at improving the agriculture of third world countries. However, the author also attempts to examine grand technical structures through the eyes of a small-scale farmer from Africa or Latin America; he describes a number of errors which have been made by the designers and builders of these large structures, as far as the ecology, economy and the human factor are concerned, so that often these structures have not fulfilled expectations and some have already become technical ruins which are awaiting reconstruction. Usually the causes of this situation are in insufficient preparatory studies which did not take into account the laws of nature and of human nature,as well as the people who were to have worked under the new conditions. This is an important study which stresses the negative aspects of large-scale projects in far away places which the designers do not properly know.

geography - socio-economic geography - regional geography + developing countries - agricultural production - water economy - FRG. 147759.

371. LÜCKER, R.:
Agrarer Strukturwandel under dem Einfluss des Sojaweltmarktes (Changes in the structure of agriculture under the influence of the world soya bean market) Geographische Rundschau, 34, 1982, No. 8, pp. 368-373. 4 figs.,4 tabs.

After cereals, oil producing plants are the most important commodity on world food markets. Soya beans adjust very flexibly to changing world demand and represent approximately 85 % of the world market of oil producing plants. Since 1950 global output has grown from 16 to 83 million tons annually. On the basis of the example of the south Brasilian province of Alto Uruquai the author demonstrates the changes which have occured due to the introduction of soya beans as a cash crop. This region has now become extremely important for Brasil's export economy. In the first part of the article the author describes in detail the advantages of this commodity: its high oil content, its use as a protein concentrate and the many products which can be made from it, which are highly nutritious; it is also an important raw material for industrial processing. The author presents interesting facts about innovations in this area.

geography - socio-economic geography - agricultural output - foreign trade - technical crops - oil producing plants - legumes - soya beans - FRG. 147757.

372. LEYDET, F.:
Papua-New Guinea: Journey through Time
National Geographic, 162, 1982, No. 2, pp. 150-171.
19 photos, 1 map.

The author describes his trip through Papua - New Guinea, which in 1982 celebrated the 7th anniversary of its independence. Its people have in recent years undergone the development from the stone age and living in a tribal system towards national feelings and more self-confidence. In 1980 a total of 40 000 tourists visited the country. Papua measures 463 000 km^2 and has 3 006 000 inhabitants, the majority of whom are Melanesians and 30 000 are Europeans or Asians. The capital is Port Moresby (with 122 750 inhabitants). 32 % of the population is literate. There are gold and copper mines; rice, yams, vegetables and coconuts are cultivated for domestic consumption; the rivers provide an abundance of fish. Cocoa beans, coffee, coconuts, palm oil are cultivated for export, as well as tropical woods. The population speaks in 700 different languages and is Catholic, Protestant and also pagan. Papua is an independent country within the framework of the British Commonwealth of Nations. Its parliament has one chamber and 109 deputies. The average life span is 50 years and the annually per capita income 750 US dollars. The average number of children per family is 4 to 5. An electrical power station has been built on the Ramu river, but less than 20 % of the population have electricity in their homes. Japan is the country's most important trading partner. 20 % of all food is imported. In the future the country will cultivate larger quantities of sugar and rice. In the western province of Ok Tedi copper and gold are mined and on the island of Bouganville the largest strip mining operation for copper in the world is found.

geography - socio-economic geography - regional geography - Papua-New Guinea - USA. 147757.

373. MANSHARD, W.:
Alternativen der Energie - Versorgung in Entwicklungsländern (Alternative energy sources - choices for the developing countries)
Geographische Rundschau, 34, 1982, No. 10, pp. 430-435.
5 figs., 4 tabs.

All development cycles and growth are dependent on energy inputs. Sufficient energy sources have become one of the key problems of mankind; energy has become as important as food and shelter. This is also true in the developing countries to an increased extent. The author analyses alternative energy strategies for third world countries not only from an economic but also from an ecological point of view; before the end of the millenium world food output should be increased twofold, otherwise conflicts will arise which have no analogy in world history. The author discusses various aspects of energy for the developing countries, beginning with traditional sources such as the burning of wood, charcoal and human and animal excrements. Bio-gas, the bio-mass, solar and wind energy are important supplementary energy sources, as well as the utilisation of various water structures for energy production.

geography - socio-economic geography - geography + energy output - regional geography + developing countries - FRG. 147759.

374. **MATZKE, O.:**
Die weltweite Ernährungssituation und ihre künftige Entwicklung (The worldwide food situation and its future development)
Geographische Rundschau, 34, 1982, No. 10, pp. 440-444.
2 figs.

In view of the poor statistics produced by the majority of the developing countries it is very difficult to precisely determine the degree of undernourishment which exists there: FAO data at present indicates 400 to 500 million people throughout the world who suffer from serious undernourishment. But the term "undernourishment" is difficult to define. The author analyses data provided by the World Bank and by the United Nations and its various agencies, as well as data concerning population growth on Earth, which by the year 2 000 will have reached 6.1 billion people. Existing trends in world food production are insufficient, so that forecasts for the year 2 000 are often alarming. After discussing some of the prerequisites for increasing output, as well as price policies, the author concentrates on the role of the developed countries (the USA, Canada, France, Great Britain, Australia) and asks whether they will be able to continue increasing their food output. In the concluding part of the study the author sums up into 11 points tentative solution for the very complicated world nutritional situation.

geography - socio-economic geography - regional geography + developing countries - geography of food production - world output + food - FRG. 147757.

375. MERESEE, U.:
Die Untersuchung der ökonomischen Effektivität der gesellschaftlichen Produktion unter territorialen Aspekt (A study of economic efficiency in social production from a territorial point of view)
Petermanns geographische Mitteilungen, 126, 1982, No. 4, pp. 223-231.
Lit. 4, 2 figs., 6 tabs.

The author discusses the theoretical and methodological aspects of a problem still waiting for solutions within the framework of geography and cartography: the problem of geographical economic efficiency. First a definition of economic efficiency based on system theory is provided. The author suggests the use of various coefficients which express the growth and quality of efficiency. He also suggests the study of some cartographic notions in this context, to express the territorial division of the economic efficiency of output.

geography - socio-economic geography - efficiency - agricultural output - industrial output - cartographic expressions - GDR. 147757.

376. MIODUSZEWSKA, W.:
Najuboższe kraje świata (The poorest countries in the world)
Geografia w szkole, 15, No. 4, pp. 188-196.

The author deals with the countries of the third world, the so-called developing countries. Some of them have in recent years achieved substantial success as far as the development of their economies is concerned. Among them are Argentina, Brazil, Chile, the Philippines, India, Columbia, South Korea, Kuwait, Mexico, Taiwan, Turkey, Venezuela, Zaïre and Zambia. South Korea is at the head of this list, with annual exports of 15.5 billion dollars, with Brazil in second place with 15 billion dollar exports and Venezuela in third place with 14 billion dollars worth of exports. According to per capita national income the developing countries can be divided into several groups: the poorest (with incomes under 200 dollars annually), various groups of more developed countries and finally fully developed countries with 8 000 dollars and more annual per capita income. In the poorest group of countries the share of industry is usually around 1 % and over 80 % of the population is illiterate. Among these poorest countries are Afganistan, Bangladesh, Laos, both Yemens, the Malediives, Nepal, Benin, Botswana, Burundi, Chad, Ethiopia, Gambia, Upper Volta, Guinea, Guinea-Bissau, the Comores, Lesotho, Malawi, Mali, Niger, the Central Africal Republic, Sudan, Tanzania, Uganda, the Cape Verde Islands, Haiti and Western Samoa. The author describes the causes of this poverty for each country separately. Most of these countries are mountainous, or have lowland marshes, semideserts or deserts. In many of them there is endemic diseases, high child mortality rates, large groups of unproductive inhabitants, a lack of raw materials or the means to extract them. Forms of aid provided to these countries are also described.

geography - socio-economic geography - regional geography + developing countries - per capita national income - Poland. 147759.

377. MYDEL, R.:
Marikultury w Japanii (Marine cultures in Japan)
Geografia w szkole, 35, 1982, No. 2, pp. 79-84,
2 figs., 2 tabs.

Japan represents 15 % of world fishing with its 10 to 11 million tons annually of caught fish, molluscs and crustaceans, as well as seaweed. This catch is consumed mostly in Japan, since Japan covers 46 % of its protein requirements by fish and other marine fauna. At present a substantial part of this catch is "farmed" from offshore fish breeding operations, which concentrate specifically on the breeding of some species of fish, molluscs, bivalves, cephalopoda and seaweeds. These operations are sometimes called mariculture or aquaculture and take place either in secluded sea bays or in special tanks filled with sea water. Also the warm waste waters from atomic power stations are used for the intensive breeding of shrimps. Japanese coastal waters have 3.5 thousand square kilometers of mariculture. Seaweeds are a basic component of Japanese national food and they are very valuable, since they contain minerals, and all vitamins. Japan harvests 40 % of the world's seaweed crop. Also important for the Japanese economy is the cultivation of mussels for making mother-of-pearl and pearls. In 1976 there were 2200 sea farms for cultivating the large Pinetada margaritifera mussel. Japan produces 25 % of the world's pearl output. In 1976 it produced 34.5 barrels of pearls, with a record year in 1967, when 146 tons of pearls were produced. Fish breeding is becoming highly productive. From 1 hectar of sea, 170 tons of fish can be "harvested". But this breeding is closely connected with an unpolluted environment and its conservation. Now these marine farms are moving to less industrialised areas of the seacoast.

geography - socio-economic geography - agricultural output - marine fishing - breeding animals + sea - cultivation of plants + sea - Poland. 147757.

378. Papua - New Guinea. A nation in the Making

National Geographic, 162, 1982, No. 2, pp. 143-149.

Papua - New Guinea is celebrating the 7th anniversary of its independence. It is seeking its place in the modern world. The author spoke to students who expressed pride in their nation. The islands were stepping stones on the road from Asia to Australia about 30 000 years ago. 450 years ago they were discovered by Europeans and called New Guinea. After the colonial rule of Germans, English and then Australians, Papua gained its independence and is now the 142nd member of the United Nations. It is composed of the western part of the island of New Guinea and an archipelago of 600 islands; its interior is accessible only by air, so that now this country has the highest number of per capita airroutes. The people speak 700 different languages, that is one sixth of all the languages of the world. The official language now is Tok Pisin (a pidgin English). The author taught school for 3 years in the capital, Port Moresby. The cement which binds together the various nationalities of the country is the threat of Indonesia, which has been occupying the western part of the island since the end of World War II.

geography - regional geography + Paupua-New Guinea - USA. 147767.

379. PINKHENSON, D.M.:
Geograficheskiye aspekty sovetskogo obraza zhizni
(Geographical aspects of the Soviet way of life)
Geografiya v shkole, 49, 1982, No. 3, pp. 10-14.

In an introduction the author describes the notion of a way of life as a social and historical category; he then describes the Soviet way of life which includes for instance the planned organization of all categories of work and working people on the basis of socialist ownership, equality and friendship, etc. But there continue to exist regional specific aspects of the Soviet way of life, which are related to natural, national-historical and economic factors. The author analyses these in detail and discusses: 1) the essence of the relationship between man and nature and the influence of nature upon the way of life, 2) the linkage between the existing way of life and the historical past of the country, etc., 3) differences which exist in the rural and urban way of life. In spite of the fact that the teaching syllabus does not explicitly mention this topic, when teaching the geography of the USSR the teacher should deal with the way of life of various regions of the country from this point of view and explain the roots and causes of various ways of life in different parts of the country and thus to educate pupils towards internationalism and patriotism.

geography - didactics of geography - geography of the population - USSR. 147757.

380. PRIEBE, H.:
Alternativen der europäischen Agrarpolitik
(Alternatives in European agrarian policy)
Geographische Rundschau, 34, 1982, No. 3, pp. 102-116.
3 figs., 1 tab.

Until now farm policy has been the source of constant tensions within the European Community. Structural surpluses, financial burdens and doubtful investments have become a burden upon the EC, both internally and towards the rest of the world. So far no acceptable solutions exist for renewing market equilibrium and reducing excess farm capacities, especially when the EC is extended in a southern direction (Spain, Portugal and Greece). On the other hand modern agriculture is the subject of increasing criticism because it is often a burden upon national budgets, it poses a health hazard because of its extended use of chemicals and also because of the changed social structure in rural areas. Both the public and farmers themselves are dissatisfied. In spite of subsidies, the latter feel themselves neglected in comparison to other groups of the population. The author describes the vicious circle of agrarian policy in the present stage of development of the EC which is finding itself in a blind alley. He also cites various one-sided projects for reform which are all unacceptable for some sections of each country or the EC as a whole.

geography - socio-economic geography - agriculture - modernisation + agriculture - EEC - FRG. 147757.

381. PŘIKRYL, J.:
Praha a její půdní fond (Prague and its land assets)
Lidé a země, 31, 1982, No. 12, pp. 539-540.

The land upon which buildings stand in Prague takes up only 4000 hectars, i.e. 8.1 % of the city's total area. Communications take up another 4.7 % railways 1.7%, forests represent 4868 hectars, recreational forest-parks in the suburbs 1492 hectars and classical urban parks 840 hectars. One seventh of the area is taken up by urban greenery and fish ponds represent 889 hectars. Half the area of the city is agricultural land - 24 398 hectars. But annually 100 to 150 hectars of arable land are lost as lots for housing or industrial buildings. Long-term plans assume that the total amount of agricultural land will decrease to 14 715 hectars, that is 60 % of what it is now. 3/4 of agricultural land is arable land, 18 % are gardens, while meadows and pastures take up 5 % and orchards and vineyards 4 %. Cereals and sugar beet are cultivated on the arable land. There are 14 000 heads of cattle on dairy farms, the number of pigs is decreasing, but the number of poultry is very high. The largest agricultural enterprise in Prague is the State Farm - Prague, which farms 46 % of the agricultural land in the city.

geography - socio-economic geography - agriculture - city + Prague - Czechoslovakia. 147757.

382. ŠLACHTA, M.:
Belize - nezávislost s překážkami (Belize - independence with barriers)
Lidé a země, 31, 1982, No. 1, pp. 41-42. 1 map.

On September 21st, 1981 Belize (until 1973 called British Honduras) became an independent country.

Guatemala had been claiming its territory for itself. The country measures 22 965 km^2, of which 689 km^2 are islands. Most of the relief are lowlands, only in the southwest the massif of the Maya Mountains is found. The country's most important branches of the economy are agriculture and the extraction of timber from the forests. 50000 hectars are cultivated, the main crops are maize, rice, legumes, sugar cane, cocoa, bananas, coconut palms. 44 % of the territory are forests which provide valuable wood. Tourism has been increasing. Industry is represented by sawmills, tanning mills, textile plants, canning and sugar refineries. The capital is Belise (50 000 inhabitants). A new capital in the interior is being built, called Belmopan. The author also describes the history of Belise. The country remains a member of the British Commonwealth of Nations. Since 1981 it is the 156th member of the United Nations.

geography - socio-economic geography - regional geography + Belise - Czechoslovakia. 147759

383. VÍT, Z.:
Poloostrov Hicocos (The Hicocos peninsula)
Lidé a země, 31, 1982, No. 1, pp. 17-21.
4 photos, 1 map.

The author describes his trip from Havana (Cuba) to the Hicocos peninsula which is a tourist centre and a very interesting area for natural scientists. It is one of the most arid regions of Cuba and is its northernmost point. It is formed by Tertiary limestones, karst caves and cliffs called Dog's Teeth (Dientes de perro) are found there. Half of the peninsula is used for recreational purposes and has luxurious hotels which used to be accessible only to the richest Americans. The tourist centre of Varadero has 1 000 inhabitants. The author also describes the flora and fauna of the peninsula, which has remained intact and still has a number of endemic species.

geography - economic geography - tourism - Cuba - Czechoslovakia. 147757.

384. RAKOVSKIY, C.N.:
Mongolskaya narodnaya respublika - sdvigi v strukture i geografii khozyastva i nasileniya (The Mongolian Peoples Republic - changes in the structure and geography of the economy and the population)
Geografiya v shkole, 49, 1982, No. 5, pp. 11-17.
2 tabs.

In 1981 the Mongolian Peoples Republic celebrated the 60th anniversary of its founding. On the road to socialism the country has undergone various changes in the social structure of the population. The influence and number of Buddhist monasteries has steadily decreased while the number of schools and factories has grown. Many of the former monks began to work in the new factories. At present there is only one monastery in Ulan--Bator, which also has a theological school and about 100 monks. The author concentrates on the changes in the composition of the population which have occured as a consequence of the political and economic changes occuring in the country. Tables sum up these changes; they concern the main branches of the economy, the social structure of the population and demonstrate the growth of urban centres.

geography - socio-economic geography - settlement geography - industry + Mongolia. 147759.

385. ROSEN, F.:
Betrachtung zur ungleichmässigen ökonomischen und politischen Entwicklung der afroasiatischen und lateinamerikanischen Länder (Comments on disparity in the economic and political development of African, Asian and Latin American countries)
Zeitschrift für den Erdkundeunterricht, 35, 1982, No. 4, pp. 135-142.
2 tabs.

The impact of the law of disparity in economic and political development in the countries of Asia, Africa and Latin America has substantially accelerated since the beginning of the seventies. The outcome is an increasing differentiation among the developing countries and a tendency towards political polarization, which in the future will hinder their common struggle against imperialism. The author analyses the factors which cause this differentiation and the direction it is taking so as to be able to correctly assess the effect of technological processes and the development of international power relations. The heritage of colonialism is one of the factors which greatly contributes to the disparate and differentiated development of the developing countries, since the objectives of the former colonial powers have been concentrated only on the maximalization of profits; also the cyclical developments of the metropolitan country is reflected in the economy of the former colony.

geography - socio-economic geography - regional geography-developing countries - Africa - Asia - Latin America - regional disparity - GDR. 147759.

386. SCHOTT, C.:
Zweiwohnungen in Frankreich (Two homes in France)
Geographische Rundschau, 34, 1982, No. 10, pp. 472-474.
1 tab.

Having two homes is a system known from ancient times, for instance in ancient Rome, and it survived into the middle ages to flourish again in modern times. In this sociological study the author provides a brief survey of the situation in having two homes in the world and especially in France where the system is most wide-spread. In France 13 % of the population (and in Paris 20 %) in 1979 had two homes. The author sees the reason for this situation in improved living standards, the extensive ownership of motor cars, a good system of highways and more leisure time, as well as longer paid vacations (in 1936 only 15 days, in 1965 4 weeks). The author also comments on the social distribution of second homes and the geographical distribution of the houses which serve for recreation as well as their possible use for farming, gardening, breeding sheep or other animals.

geography - socio-economic geography - housing - recreation - regional geography + France - FRG. 147757.

387. ŚMIECH, Z.:
Indywidualne gospodarstwa rolne w Polsce należace do użytkownikow w wieku ponad 55 let (Individual farms in Poland belonging to owners over 55 years of age)
Czasopismo geograficzne, 53, 1982, No. 1, pp. 67-74.
Lit. 13, 3 figs.

The author discusses the situation and distribution of private farms which belong to persons over 55 years of age and which often do not have anyone to take over from the owners. This is a consequence of sizable migration of rural inhabitants to urban areas, which has greatly accelerated in the postwar period, among others as a consequence of indusrialization.

geography - socio-economic geography - regional geography + Poland - agriculture - population migration - urban development - industrialization - Poland.
147757.

388. TRÖGER, U.:
Die Rohstoffsituation in der Sahara (The raw material situation in the Sahara)
Geographische Rundschau, 34, 1982, No. 6, pp. 292-298.
Lit. 8, 4 figs., 1 tab., 1 photo.

The Sahara desert has great natural wealth. This wealth includes first of all petroleum, then oil shales, iron, manganese and uranium ores, phosphates, natural gas and subterranean fossile waters. Petroleum was for the first time discovered here in 1909 at Gemse on the Red Sea coast in the Egyptian western desert; after World War II, petroleum fields were open in 1956 at Edjeleh in the Algerian district of Messaoud; in 1965 a natural gas deposit was found in the Syrta basin and in the seventies another petroleum field in the western Hasi R´Mel desert, as well as in southwestern Morocco. Phosphates were first discovered in Qusseir on the Red Sea and after World War II in Bou Crae in the Spanish Sahara and in Abu Tartur in southwestern Egypt. Uranium was discovered in Niger in the sixties. As far as petroleum is concerned the Sahara has 5 % of world supplies and 2 % of natural gas supplies. Since the seventies the most important producer of iron ore is Mauretania. In southwestern Morocco there are large deposits of oil shales in the Tatfaya basin where approximately 20 % of the world´s deposits are; they are capable of yielding 15 % petroleum. At Bou Crae there are 3 billion tons of phosphates with a very high concentration. Also the uranium ore in Niger has a very high concentration of 60 %. The author also describes new findings and explains the amounts of fossile water found and its importance.

geography - socio-economic geography - regional geography - + North Africa - desert + Sahara - petroleum and natural gas - minerals + extraction - FRG. 147759.

389. WIELOŃSKI, A.:
Problemy gospodarki żywnosciowej Polski (Problems of food production in Poland)
Geografia w szkole, 35, 1982, No. 2, pp. 52-56.

The article concerns three basic branches of economic activity: agriculture, the food processing industry and those industries which provide agriculture with machines, fertilizers, and other products and services. 3.7 million persons are employed in these activities, which represents 30.5 % of the labour force and 29.2 % of the country's fixed assets, 29.8 % of its gross social product and 22 % of its national income. In 1974 the first long-term plan for food production sectors was drawn up for the period until 1990. It is assumed that the population will continue to grow, that urban development will continue and that large-scale agriculture will also continue to grow. A worrysome problem is the development of world food markets. Also poor weather often leads to problems in this area. Among Poland's main problems are the need to assure the adequate nutrition of the population, to strengthen production and stabilize prices, improve the technical quality of the food processing industry, improve retail trade with food and improve deliveries of fertilizers, machines, and agricultural chemicals to farmers. Disproportions existing in agriculture should be overcome. The Warsaw region had the highest productivity per hectar, which is almost twice the average for Poland as a whole. Especially in the vicinity of large towns and cities the quality of agriculture should be improved.

geography - socio-economic geography - geography of food production - regional geography + Poland - agriculture - Poland. 147757.

390. WINIDOWA, J.:
Światowy rynk kawy i jego perspektywy (The world coffee market and its outlooks)
Geografia w szkole, 35, 1982, No. 2, pp. 84-89.

Coffee is a very important component of food. It is interesting to note that in world trade it is the second most important commodity, after petroleum ! The author first describes the very interesting history of coffee, its discovery by Europeans and how it spread throughout the world. In the middle of the 18th century coffee found its way from South America to Central America where since then coffee production is the dominant crop. The share of South and Central America in world production in the early 20th century was 90 %. The continent from which coffee originally came, Africa, only recently achieved a larger share of the market. In 1979 the coffee crop was 4.9 million tons of coffee: 65.6 % in Latin America, 23 % in Africa, 11.3 % in Asia and Oceania. In 1979 Brazil alone produced 26 % of world output. African production has increased during the last 50 years from 1.3 to 23 %. Tables show the coffee consumption of various countries. The highest per capita consumption is in the Scandinavian countries (13 kg annually for every person). In the FRG this figure is 9 kg, in Poland only 1 kg. In the producing countries the highest consumption is in Brasil, Mexico, Costa Rica and Ethiopia where 40 - 50 % of the coffee crop is consumed domestically. The author also describes price fluctuations on coffee markets and the Pancafé organization or so-called Bogota group which has been attempting to stabilize coffee prices and which controls the prices of 54 % of world output. In conclusion the outlooks for coffee consumption and future markets are discussed.

geography - socio-economic geography - agriculture - coffee-foreign trade - Poland. 147757.

391. WOLST, C.:
Die Probleme des Assuan-Staudammes (Probleme of the Assuan dam)
Geographie im Unterricht, 7, 1982, No. 11, pp. 434.446.
Lit. 8, 9 worksheets, 3 diagrams

The Assuan dam is the largest structure built in Egypt since the pyramids. This technological miracle not only makes a highly positive contribution to the development of the Egyptian national economy, but also had led to a number of negative consequences. The author shows how in the course of three teaching lessons it is possible to critically acquaint pupils with the probleme of this dam. First the reasons which led to the building of the dam are explained, then the positive contribution it has made and in the final lesson its negative aspects. The dam provides sufficient amounts of water to make irrigation possible throughout the whole year. However, the rise of subterranean water had led to salification of the soil and the creation of mud sediments in the reservoir, depriving fields of a natural fertilizer which has made the close vicinity of the Nile so fertile for many centuries. This leads to the necessity of using artificial fertilizers. Also the material from which bricks for houses was made - Nile mud - has been lost. The fish catch has sharply declined and hence a number of people have lost their employment. The water in the dam has become eutrophic and the surface of the water is overgrown with Water hyacinth (Eichhornia parapes). The shores of the reservoir are becoming eroded. The contruction of the dam has also led to problems with the weight of the water mass and hence an increase in the danger of earthquakes in view of insufficiently strong bedrock formations. Because of the huge evaporation of water from the reservoir the microclimate in the vicinity of the dam is changing. Tourism has greatly increased, but so has the pollution of the environment.

geography - socio-economic geography - regional geography + Egypt - Assuan dam. FRG. 147713.

15.4 Regional geography

392. ARDEN, H.:
The Two Souls of Peru
National Geographic, 161, 1982, No. 3, pp. 285-321.
22 photos. 1 map.

The author describes the political events of recent years in Peru, the downfall of president Fernando Belaúnde Terry´s government, the victory of the military junta, its unsuccessful rule and a return to civilian government, but with a foreign debt of 9 billion dollats. The author describes the history of Peru, the defeat of the 6 million Inca empire by Cortes with his 200 soldiers. Also the economic difficulties of the government are discussed. Peru is one of the world´s greatest fishing nations, in the cold Humboldt stream anchovies and other fish are found in large numbers. In recent years the number of fish have greatly declined as a consequence of too extensive fishing, and water inversions of warm water. The majority of the Indians in the country speak the ancient Inca language called Keohua. Peru has a highly polarized society with great differences between rich and poor. At the border with Ecuador petroleum is now extracted and in 1981 Peru exported 1 billion dollars worth of this commodity.

50 % of all inhabitants live along the costal area, which is 1400 miles long and in the river valleys with highly productive farms where cotton and sugar cane are cultivated. The last member of the Uru tribe, which lived on floating islands on Lake Titicaca, died recently and with him this unique tribe has now became extinct.

geography - socio-economic geography - regional geography + Peru - petroleum - economy - inhabitants - USA.
147739.

393. BARLETT, D. - BARLETT, J.:
Family Life of Lions
National Geographic, 162, 1982, No. 6, pp. 801-819.
22 photos.

The Autralian husband and wife team of natural scientists, film-makers and photographers spent 4 years in the Etosha national park in northern Namibia, in Africa, which is a relatively arid area with a large saline lake. Lions have become extinct in Europe, North Africa and on the Sahara. In India only 200 lions remain extant and in the remainder of Asia they have also become extinct. The only living wild lions can be found south of the Sahara in Africa. The authors spent 1 600 hours observing lions. In this particular area there were about 500 of them. They hunt Spring buck, kudu, gnu and even porcupines ! They rest and sleep up to 20 hours a day, but they live a highly social life. The authors observed 200 lions to whom they gave names to facilitate observation. The majority of young lions leave their pride when they are 3 years old. The authors also observed their copulation. During 5 hours and 40 minutes one pair copulated 23 times. Lions try to hunt their prey with the least exertion. An adult lion will eat as much as 30 kilos of meat as a single meal. The females are better hunters than males. Most of the hunting is done at nightime or just before dawn. During 4 years the authors were able to observe only 4 hunts in the daytime. Porcupines are hunted only by older, more experienced lions. Lions drink by catching drops on their tongues. Zebras have a precise distance at which they know they can safely approach lions. But even when they come closer they often are able to defend themselves against lions by kicking them and sometimes causing them serious injuries.

geography - zoogeography + lions - regional geography + Namibia - animal community - USA. 147759.

394. BENCHLEY, P.:
Boom Times and Buccaneering the Bahamas
National Geographic, 162, 1982, No. 3, pp. 364-395.
20 photos, 2 maps.

The Bahamas are composed of 29 islands, 661 islets and 2387 cliffs. They were discovered by Columbus in 1492; he landed on the island of Guanahani on October 10th. The Spanish conquistors forced the population to do heavy slave labour and this led to the extinction of the native Arawaks. For almost a century the Bahamas were left uninhabited until the middle of the 16th century; they then were occupied by the English and also pirates made their home here and from the islands attacked Spanish and French ships. In the 18th century the Bahamas became a British crown colony and in 1973 they became an independent nation. They have an area of 13942 km2 and 210 000 inhabitants. The capital is Nassau on the island of New Providence. The islands are made of coral reefs, are low and have a tropical or subtropical climate. The country has an elected parliament. The most import economic activities are tourism, banking, there is an oil refinery, a pharmaceutic company, the making of alcoholic beverages, etc. Haitians work on the islands - there are from 10 to 15 thousand of them. Tourism accounts for two thirds of national income formation. Of the 210 thousand inhabitans, 135 thousand live in Nassau. The islands are often subject to hurricanes. The island of Andros has more developed industry. The Bahamas are one of the places from which marihuana is smuggled into the USA.

geography - socio-economic geography - regional geography - Bahamas - USA, 147759.

395. BOUGH, C.:
Arabský sáliv a úžina Tírán (The gulf of Arabia (Aquaba) and the strait of Tiran)
Lidé a semě, 31, 1982, No. 10, p. 472. 1 map.

The gulf of Arabia (or Aqaba) is 21^{0} km long and at its mouth in the Red Sea it has a width of only 20 kilometer and 37 at the widest place. Near the Sinai bank lies the island of Tiran and the strait of Tiran is only 900 meters wide. The island of Tiran belongs to Saudi Arabia. In 1954 Saudi Arabia gave Egypt the right to use this island, together with the neighboring island of As-Sanafir. Tiran is 70 km long, As-Sanafir is 40 km long. In 1967 both islands were occupied by Israel. Now Israel and Saudi Arabia both claim the islands. Tiran has an American military base.

geography - political geography - regional geography - Saudi Arabia - Czechoslovakia. 147759.

396. BOOTH, R.:

Contrary New Hampshire

National Geographic, 162, 1982, No. 6, pp. 770-799.
20 photos, 1 fig., 1 map.

New Hampshire is in the northweastern USA on the Atlantic coast. It is one of the smallest states in the Union which has only 931 698 inhabitans. The state legislature´s lower chamber has 400 representatives, which means that every 2300 voters have their representative there. New Hampshire is the fastest growing state in the Union and in the last 12 years it has grown by 20 % on the basis of migration. Also 600 new businesses were started during this period. This state has the least unemployment in the Union (less than 5 % annually), and the lowest per capita taxes in the country. Low tax revenues are augmented by a state lotery, by income from horse and dog races and by fines for various misdemeanours, as well as taxes on cigarettes and alcoholic beverages. The state is host to 6 million tourists annually, who spend 850 million dollars. There are 1300 lakes and ponds in the state. Among its natural beauties are the White Mountains which have a national park. The north of the state is mountainous, while the south is formed of lowlands and concentrates the state´s industry. 86 % of the land is covered with forests. The state has textiles and computer and electronics production. The James River Corporation in Berlin is a huge paper manufacturer; in the vicinity of its plant, environmental problems have developed. On the Atlantic coast the Seabrook nuclear power station is in operation

(2300 megawatts). The author briefly describes the history of the state and also its nature conservation traditions.

geography - physical geography - socio-economic geography - regional geography + USA - New Hampshire - USA.
147759.

397. BLAŽEJ, J.:
Za uhlím do Barentsburgu (To Barentsburg for coal)
Lidé a země, 31, 1982, No. 11, pp. 515-518.
2 photos, 1 map.

The most northern civilian airport in the world is in the town of Longyearbyene which has 1000 inhabitants and is located on the Svalberg islands (Spitsbergs). TU-154 airplanes from the Soviet Aeroflot coming from Moscow and Murmansk land here. The majority of the passangers are coal miners from the Donbas and the Moscow basin who work on the islands in the northernmost anthracite mines in the world on the basis of a contract. From the airport they are taken by steamships or by helicopters to the mining town of Pyramiden (with 900 inhabitants) or to the town of Barentsburg (with 1300 inhabitants), which in 1982 will celebrate the 50th anniversary of hoisting the Soviet flag over newly discovered coal deposits in the Green Fjord (Grømfjorden). The auther describes his trip to Barentsburg and also its history. The island belongs to Norway, but according to the agreement (50 countries, including Czechoslovakia) can mine coal on the island.

geography - socio-economic geography - Svalberg islands - regional geography - coal + extraction - Czechoslovakia.
147757.

398. BRAWER, M.:
Der Kanal von Mittelmeer zum Toten Meer (A canal from the Medditeranean to the Dead Sea)
Geographische Rundschau, 34, 1982, No. 12, pp. 576-580.
4 figs.

The level of the Dead Sea is constantly dropping because waters from its tributaries (especially the Jordan) are used for irrigation in Israel and Jordan. This has led to plans for building a canal which would connect the Dead Sea with the Mediterranean. This would lead to a rise in the level of the Dead sea and make possible the building of a power station to supply nearby areas with electricity. The author discusses the ecological aspects of building such a canal and the future of the Dead Sea as a unique natural phenomenon. The building of the canal should begin in 1983 and take 6 years.

geography - physical geography - Mediterranean sea - Dead sea - regional geography + Israel - Irrigation.
FRG. 147757.

399. BUREŠ, F.:
Budoucnost vikuni (The future of the vicuna)
Země a lidé, 31, 1982, No. 2, pp. 74-75.
1 photo.

Since time immemorial, llamas have been the most useful animals bred by the Indians living in the Andean mountains of South America. The llama and the alpaca are bred as domestic animals, while the guanaco and the vicuna are wild species. Before the Spanish conquest, the vicuna was considered to be so valuable it was set aside only for the use of Inca rulers. Afterwards it became almost extinct because of extensive hunting. 15 years ago only 10 000 vicunas were living in Peru. Since 1965 this animal has been protected by the government and now its numbers have increased to 65 000. By the year 2000 there should be 2 million of these animals in Peru.

geography - zoogeography - nature conservation + Peru - Czechoslovakia. 147759.

400. BUREŠ, F.:
Velká čínská zeď (The Great China Wall)
Lidé a země, 31, 1982, No. 10, p. 465.
1 photo.

The Great Wall of China was built in an east-west direction in northern China. Its construction was begun in the 7th century B.C. and took 15 years to build. It protected the northern border of a united empire against the raids of nomadic tribes in the north. Later it was repaired and modernized and its present state was completed in the period 1368 - 1644 a.d. under the Ming dynasty. It now measures 6350 kilometers. The author visted the Wall near Peking.

geography - historical geography - regional geography + China - Czechoslovakia. 147757.

401. CAPUTO, R.:
Sudan: Arab-African Giant
National Geographic, 161, 1982, No. 3, pp. 346-379.
21 photos, 1 map.

The author describes his trip, which covered 16 000 kilometers, through the Sudan in the horn of Africa. This country has been independent for 26 years.

It measures 2 505 825 km^2 and has 17 806 000 inhabitants who are members of 500 different tribes. Its inhabitants are Arabs and Negroes; the country has a varied environment and landscape, which includes deserts, steppes, the bush, forests, swamps, rain forests and high, cool mountains. More than 100 languages are used. In the swampy areas of the south a dangerous parasite causing the disease bihharziasis is found, as well as 63 dangerous types of mosquitoes. After achieving independence in 1956, civil war broke out in the country between the Arabs in the north and the Blacks in the south, in which so far 500 000 have been killed. In Kenana the largest sugar refinery in the world is found, with a production capacity of 363 000 tons of sugar annually. Of the arable land in the Sudan, only one thirteenth is actually under cultivation. But the quality of agriculture is slowly improving and irrigation canals are being built. The country has no petroleum imports. A 360 km long canal is being built which will improve the irrigation of arid ares and will also improve communications in the vicinity of the White Nile. One of the country's greatest problems is inflation which reaches 40 % annually. There is a great deal of migration within the country in quest of work and many people emigrate abroad. The most important irrigated region of the Sudan is between the Blue and White Nile at El Gesira. Cotton is still the most important export crop, in spite of the fact that production has declined. If it were possible to combine the natural resources of the country with Western technology and Arab capital from the petroleum exporting countries, Sudan might become an Arab window for the world. The author describes the variety of the landscape and the historical monuments found in the country. The ruins of the old town of Meroe, which used to be the capital of the Kush Kingdom in the period 800 B.C. to 350 a.d., contain stone inscriptions in the Merotic language which have hot yet been deciphered.

geography - socio-economic geography - regional geography + Sudan - USA. 147759.

402. CRABB, P.:
A New Australian Railroad - North to Darwin
Geographic Review, 72, 1982, No. 1, pp. 90-93.
1 fig.

The article provides a survey of the project for building a new Australian reilway from Alice Springs to Darwin in the Northern Territories. The cost of the project will be 450 million Australian dollars. Until now goods were transferred from rail to trucks in Alice Springs. Economic analyses have indicated both positive and negative aspects of the project. Among the positive aspects are savings in fuel, the regularity of railway traffic and a future for tourism in the area. The project would link the port of Adelaide in southern Australia with Darwin, the capital of the Northern Territories.

geography - socio-economic geography - regional geography - Australia - transportation. 147759.

403. ČERMÁK, V.:
Heraclea
Lidé a země, 31, 1982, No. 5, pp. 232-234.
3 photos, 1 map.

In the middle of the 4th century B.C. at the site of the present town of Bitola with 50 000 inhabitants, several kilometers from the present border between

Yugoslavia and Greece, the ancient town of Hecalea was founded. It was founded by Phillip II of Macedonia at the time of the greatest glory of Macedonia. In 168 B.C. Macedonia came under the rule of Greece and this area became important as a transportation junction for the eastern parts of the empire. The author describes the history of the town, its remnants of ancient buildings, the amphitheatre, etc.

geography - historical geography - regional geography + Yugoslavia - ancient history - Czechoslovakia. 147759.

404. ČÍČEL, D.:
Indiáni Bolivie (The Indians of Bolivia)
Země a lidé, 31, 1982, No. 2, pp. 81-84.

The author describes a festival to Pachamana, godess of the Earth and the festival of the Sun which are celebrated by the Indians in Bolivia. 50 % of the inhabitants of Bolivia are Indians who speak two languages: Aymara and Kechua, while the official language of the country is Spanish. In the mountainous part of Bolivia potatoes are cultivated at altitudes of 3800 m above sea level; in the valleys also maize and vegetables are raised. The soil is still tilled with a hook and once every 3 to 4 years fields are left fallow. The author describes the life of the Indians, their communities, transportation, etc. He also describes their cleanliness, praises their diligence and describes the food they eat, including the coca leaves, which prevent hunger.

geography - socio-economic geography - regional geography - Bolivia + Indians - Czechoslovakia. 147759.

405. ČERNOCH, J. - ŠKORNIČKA, F.:
Za dřevem na Sumatře (Timber cutting in Sumatra)
Lidé a země, 31, 1982, No. 7, pp. 310-313.
4 photos.

The authors visited northern Sumatra, where rubber plantations are located. The majority of Indonesians are Moslims, but the Bataks who live on Sumatra are Christians. The authors describe Batak houses with carved wooden ornaments and houses built on pilots. 90 % of Sumatra is covered by rain forest in which over 3700 species of woody plants grow. The life of the people is described, their sense of cleanliness, the work of lumbermen, cutting trees on scaffolding made of bamboo and floating the timber during floods. The authors participated in the work of a team which sought valuable species of trees, especially those which provide economical opportunities for cutting timber.

geography - socio-economic geography - regional geography + Indonesia - timber production - Czechoslovakia. 147759.

406. ČEŘOVSKÝ, J.:
Unstruttál
Lidé a země, 31, 1982, No. 2, pp. 53-56.

The author describes a trip to the picturesque valley of the river Unstrut. In its lower section, the river valley is lined with the northern most vineyards in Europe. The Ustrut river begins above Dingelstädt, near the western border of the German Democratic Republic and joins the Saal river in the town of Naumburg in the GDR. This region is rich in natural beauties and cultural monuments. The town of Naumburg is over 900 years old and is also important in Czech history as the object of a Hussite expedition during the Hussite wars. Wine has been cultivated in this area since the 10th century.

geography - socio-economic geography - regional geography - GDR - Czechoslovakia. 147759.

407. DOTHAN, T.:
Gaza Sands Yield Lost Outpost of Egyptian Empire
National Geographic, 162, 1982,No. 6, pp. 738-769.
23 photos, 5 figs.

In 1972 a golden amulet with the face of the Egyptian god of love and fertility Hatha was found in the Gaza strip on a sand dune near Dair el-Balah. After careful study of the area where the amulet was found, a cemetary 3000 years old was discovered, full of valuable historical artefacts. In spite of the fact that long ago the cemetary was looted, nevertheless it yielded valuable material because the thieves were evidently interested only in gold and discarded everything else including valuable cameos, careol seals, etc. The remnants of a royal palace were also discovered here from the middle of the 14th century B.C., as well as the ruins of an old Egyptian fortress from 1360 B.C. including a water reservoir. The author puts the presence of Egyptians in this area into the context of the exodus from Egypt led by Moses. The treasures and coffins found are from the late Bronze era.

geography - historical geography + Egypt - archeology - Czechoslovakia. 147752.

408. DOUBEK, E.:
Z historie majáků (From the history of lighthouses)
Lidí a země, 30, 1982, No. 5, pp. 236-237.
1 fig.

The first lighthouses were built by the ancient Greeks. Among the first known lighthouses was the Pharos built by Sostratos from Knida in 299 - 279 B.C. near Alexandria. It was 110 meters high and at that time it was considered to be one of the seven wonders of the world. During imperial Roman times we have historical documents concerning 30 lighthouses, the largest of which were at Boulogne sur Mer (62 meters high) and at La Coruna (40 meters high). During the Middle Ages many lighthouses were built. The author describes the important lighthouses in the GDR and also their energy sources.

geography - historical geography -marine transport - lighthouses - GDR - Czechoslovakia. 147759.

409. DVOŘÁK, J.:
Cestování po Praze (Travelling in Prague)
Lidé a země, 31, 1982, No. 8, p. 381.

Prague holds a record as far as the use of the public transport system is concerned. Annually each inhabitant of Prague takes 930 trips, i.e. 2 and half trips daily. The railways in Prague transport 411 million passangers. Prague has 20 kilometers of the metro (subway), 380 kilometers of trolley lines and 26 trolley lines, as well as 162 bus lines which cover 1400 kilometers of road. The Public Transport Company (Dopravní podnik) of Prague has 20 000 employees and immludes also over 1400 taxis and 12 ships which run along the Vltava river.

geography - transportation geography - Prague - Czechoslovakia. 147757.

410. DVOŘÁK, J.:
Španělské železnice (Railways in Spain)
Lidé a země, 31, 1982, No.10, p. 474.

The Spaniards built the first railway in Cuba in 1837. It was 72 kilometers long and led from Havana to the vicinity of the town of Güines. The first railway to be built in Spain ran from Barcelona in the northeast to the town of Malaro. The wheel spacing on Spanish railways (so-called Iberian spacing) is the widest in Europe - 1668 mm, while in central Europe it is 1435 and in the Soviet Union 1524 mm. At present Spain has 13 553 kilometers of tracks with 1227 tunnels and 4024 bridges. Almost 40 % of Spanish railways have been converted to electrical energy.

geography - economic geography - regional geography + Spain - transportation geography - Czechoslovakia. 147759.

411. EL-BAZ, F.:
Egypt's Desert of Promise
National Geographic, 161, 1982, No. 2, pp. 190-221. 28 photos.

The author is an Egyptian geologist from the University of Cairo. He has undertaken 12 trips to the Egyptian desert as a geologist, archeologist, botanist and geographer. The western Egyptian desert is the oldest part of the Sahara and covers two thirds of the territory of Egypt. The area evidently has thousand year long cycles as for as the climate is concerned. At Gabel Nabta on the banks of a dried up lake are the remnants of an 8000 year old neolithic village with oval houses made of straw and stone and with wells 2.8 meters deep and with storage trunks full of barley seeds and the bones of domestic animals. At Balat in the Dakhla basin French archeologists have discovered the ruins of a flourishing town from the period of the 4th dynasty (2385-2181 B.C.) based on an agricultural economy. Drawings indicate that ostriches, gazelles, Wart hogs, lions and giraffes lived here, but not camels, which were brought to Egypt and to Africa only after 500 B.C. Petroglyphs indicate that camels were introduced to Egypt later than to other sections of Africa. The main oases in this desert are Faiyum, Siwa, Bahariya, Farafra, Dakhla and Kharga. The largest depression in the area is Qattara, which is 133 meters below sea level. The Egyptians have far-reaching plans for this depression and plan to build a canal here 75 kilometers long, to bring sea water to Qattera, which would at the same time provide power for an electic power station to produce 5.7 billion KW. Also salt would be evaporated here industrially. The sand dunes in the desert are very mobile and move as much as 100 meters; they are up to 200 m high and chains of dunes measure hundreds of kilometers. A satellite called Nimbus 6 serves for orientation in the desert. It sends out signals 2 to 3 times daily to a station in Alaska which are transmitted from there to Maryland (USA) and then to Egypt. There are large supplies of subterrenean fresh water in the desert, which in some places is 25 000 years old. The amount of land used for crop cultivation has been extended by irrigation. The desert has substantial natural resources, including petroleum. In oases the date palm is the main source of food; the older these palms are, the greater their yield. Near Bawiti there is a date packing plant from where dates are exported. Inferior quality dates are fed to cattle. Egypt at present has 42 million inhabitants, but utilizes only 4 % of it territory for agriculture.

geography - physical geography - socio-economic geography - desert Sahara - climate - historical geography - archeology - irrigation plans - raw materials - Egypt - USA. 147759.

412. ENGEL, J.:
Mexiko, ein "Swellenland" im Entwicklungsprozess, ein Land im Ringen und seine Identität. Unterrichtseinheit für die Sekundarstufe I. (Mexico - a "bubbling" country in the development process, a country struggling for its identity. A topic for teaching in the lower classes of secondary school.) Geographie im Unterricht, 7, 1982, No. 6, pp. 217-227. Lit. 7, 3 figs., 2 maps.

Mexico is a developing country which is struggling to rapidly gain economic independence and freedom, to overcome territorial and social inequality, to industrialize and find its own national identity. There are ample contradictions in this country, between poverty and riches, between rural and urban areas, between Indians and Mexicans. Among the most pressing problems are education, providing sufficient water for some areas and creating a sense of national awareness. The author briefly describes the history of Mexico and its struggle for freedom. He also discusses the existing economic situation and plans for improving it.

geography - socio-economic geography - regional geography - developing countries + Mexico - FRG. 147713.

413. GLEBE, G.:
Republik Irland - sozioökonomische Disparitäten eines Peripherraumes (The Irish Republic - Socio-economic disparities in a peripheral area)
Geographische Rundschau, 34, 1982, No. 4, pp. 173-179.
Lit. 24, 5 figs., 2 tabs.

The Irish Republic is located at the periphery of Europe and has a number of structural weaknesses. The author describes a number of socio-economic factors which indicate existing structural problems, as well as the most recent changes in social and economic relations in the country and their connection to regional disparity in Europe and within Ireland.

geography - socio-economic geography - regional geography - Irish Republic - regional disparity - FRG. 147759.

414. HAACK, B.N.:
Deforestation in Kenya
Journal of Geography, 81, 1982, No. 4, p. 151.
2 figs.

Every year 20 million hectars of forest disappear in the world as a consequence of timber production. Most of these losses are in tropical areas, where it is assumed that by the year 2000, 40 % of the tropical rain forest now in existence will disappear. Thus for instance in the decade of the seventies Thailand lost a quarter of its forests, Costa Rica a third, the Ivory Coast also one third. Usually the deforested area is used for raising crops and the wood is used as fuel. But for the world as a whole this deforestation process has far reaching consequences for the development of the climate. Usually developing countries strive to produce the largest possible amount of food for increasing populations and this places pressures on the forest. Most development projects in the developing countries are carried out at the expense of forests. A large amount of wood is used to produce charcoal for households, and for small industrial enterprises. Aerial photographs and those made by the Landsat satellite show areas of Kenya with the Kakunega Nande jungle. One photo was made in February 1973 and another of the same area in May 1979. A comparison shows that in some places the jungle has entirely disappeared. Similar situations exist in many parts of Kenya, as well as Ethiopia and the Sudan.

geography - physical geography - phytogeography - deforestation - timber production - USA. 147759.

415. HAMMOND, N.:
Unearthing the Oldest Known Maya
National Geographic, 162, 1982, No. 1, pp. 126-140.
15 photos, 5 figs., 1 map.

In northern Belize archeologists have been digging into the interior of a Mayan pyramid. Here they have found artefacts from the oldest Mayan culture, one of the most complicated civilizations of the New World. Mayan culture reached its apex in the first millenium after Christ when it produced sophisticated visual art, architecture and an advanced system of writing. New findings in Cuella in northern

Belize have now pushed the beginnings of Mayan lowland culture to the period of 2 400 B.C. The Mayas at first lived on the territory of what is now Guatemala, the Yucatan peninsula and Honduras. Excavations in these places have showen the development of their early buildings, crafts, agriculture and trade, but also many findings documenting human sacrifice. These findings open a new chapter in the history of the Mayas and show that they developed a non-nomadic civilization very long ago.

geography - historical geography - archeology - Belize. 147757.

416. HÄUFLER, V.:
Sto let University Karlovy, zase jen České
(Ome hundred years of the Charles University again Czech)
Lidé a země, 31, 1982, No.2, p. 57.

On the basis of a decree of the Austrian-Hungarian imperial government the Charles university in Prague was divided into German and Czech universities in 1882, that is one century ago. This decision was made at a time when the development of the university was clearly headed towards the use of Czech at the university and this division in fact was aimed at damaging Czech science. The first Rector of the Czech part of the university was V.V. Tomek, the first dean of the Philosophical Faculty (which also included the natural sciences), was F.J. Studnička. Since 1856 Jan K. Palacký taught geography at the Czech Philosophical Faculty (he later became a full professor). A law from 1920 rectified the greatest injustices of the law from 1882. Only after 1945 did the Charles University become uniquely Czech.

geography - education _ Czechoslovakia - Charles University. 147757.

417. HELLER, W.:
Griechenland - ein Unterentwicklungsland im der EG
(Greece - an insufficiently developed country in the European Community)
Geographische Rundschau, 34, 1982, No. 4, pp. 188-195.
Lit. 21, 1 photo, 5 maps, 3 tabs.

On January 1st, 1980 Greece became a member of the European Community. This provides a number of development opportunities for the country, but it is also risky from the point of view of the other EC members. Since the election victory of the Panhellenic Socialist Party (PASOK) in the parliamentary elections in 1981 there have been various discussions about limiting economic relations with Greece. The territory of the EC has been increased by 8.6 % by Greece becoming a member and its population has grown by 3.7 %,that is by 10 million people to a total of 270 million. Also the conflict between Greece and Turkey concerning Cyprus is a source of problems, as well as various negative aspects of the Greek economy. The author discusses all these problems in detail.

geography - economic geography - regional geography - Greece + European Community - FRG. 147759.

418. HIRAOKA, M.:
The Development of Amazonia
Geographic Review, 72, 1982, No. 1, pp. 94-98.

Probably no other country in Latin America has become such an object of interest during the last two decades as Amazonia. This huge, sparsly inhabited area must deal with a large number of serious problems. The article reports on a scientific conference concerning the development of the Amazon basin which was held in 1979 at Cambridge University. Four basic topics were discussed: ecological problems, development characteristics, settlement problems and the effects of economic development on the indigent population. There is of course no certainty that the recommendations of the conference will be taken into account because economic and population pressures require the systematic exploitation of the tropical rain forest. The author nevertheless hopes that actual development will find a middle way between total exploitation and total nature conservation - for the benefit of the jungle population.

geography - economic geography - regional geography - Brazil - nature conservation - development. 147759.

419. HOKEŠ, E.S.:
Dva záhadné znaky (Two curious characters)
Země a lidé, 31, 1982, No. 4, pp. 187.
1 photo.

The author explains the meaning of two Chinese characters which mean Hong Kong. The word comes from the dialect of a minority people called Tanka, or boat people, who now represent only a small minority of the population of Hong Kong. The country is dominated by the Kowloon hill (603 meters). The author describes the life of the crown colony, its huge port, problems with environmental pollution and other problems.

geography - regional geography - Hong Kong - enviromental pollution - Czechoslovakia. 147759.

420. HOLEČEK. M.:
Plovdiv - město mnoha jmen (Plovdiv - a town of many names)
Lidé a země, 31, 1982, No. 11, pp. 508-512.
1 fig., 7 photos, 1 map.

During its varied history Plovdiv has used a number of various names. It has been called Eumolpias, Filippopolis, Trimontium, Pulpudeva, Papaldiu, Paldiu and Filibi. It is one of the oldest and most beautiful towns on the Balkan peninsula. The author describes the architecture of the town, its archeological and ethnographic museum. The site of the town was a settlement already 6000 years ago. In the town's centre there is a large mosque. Its Old Quarter is one of the best preserved and most beautiful examples of Bulgarian architecture. Its modern sections include a cultural centre and many industrial plants; also regular trade fairs takes place in Plovdiv.

geography - regional geography - Bulgaria - settlements - Czechoslovakia.147759.

421. HOLEČEK, M.:
Nová rajonizace cestovního ruchu v ČSSR (A new division of tourism into districts in Czechoslovakia)
Země a lidé, 31, 1982, No. 4, pp. 188-189.
1 photo.

In view of the fact that the requirements of various sectors of the national economy and those of tourism and recreation were sometimes of a conflicting nature,it was decided in 1962 to determine the division of tourism and recreation in various districts. A detailed analysis of the quality of the whole territory of the country from the point of view of tourism and recreation was carried out,natural and civilizational factors were assessed, as well as various other factors, including communications, transportation and the availability of tourist facilities. 47 areas in the Czech Socialist Republic and 20 in the Slovak Socialist Republic were declared tourist districts. After 20 years, various changes have occured in the concentration of settlements, in the demand on the part of the population as far as tourism and recreation are concerned. The number of privately owned motor cars has greatly increased, as well as the number of foreign tourists and the number of privately owned summer cottages and cabins. It has thus been necessary also to carry out changes in these districts. This change was approved by the government in 1981. The Krkonoše mountains, the spas of western Bohemia, the Jeseníky mountains, the Valachia area and the Šumava and Beskyd Mountains have all been declared tourist districts of the 1st category. 79 % of the territory of the Czech Socialist Republic is now made use of for purposes of tourism. A total decrease of 150 km^2 has taken place in comparison to the previous division into districts.

geography - geography of tourism and recreation - Czechoslovakia. 147757.

422. HRADECKÝ, P. - ŠEVČÍK, J.:
Sangay - hora šedého kamení (Sangay - a mountain of gray stones)
Lidé a země, 31, 1982, No. 6, pp. 268-272.
7 photos.

The authors describe an expedition to an active volcano called Sangay which is found in the eastern Andes of Eduador. Its specific characteristic is the fact that it lies on the outer slopes of the eastern Cordilleras. During most of the year there is abundant rainfall on the volcano so that it is almost constantly hidden in fog. It is also known for its frequent but irregular eruptions. It was first scaled by the British mountaineer Chris Bounington in 1966. The first Czechoslovak expedition reached its peak in 1972. The authors of this article participated in another expedition in 1982, which was organized under the auspices of the Czechoslovak Geological Institute, the Central Geological Institute and Czechoslovak Documentary Films.

geography - physical geography - regional geography - South America - mountaineering - Czechoslovakia. 147759.

423. HUŘÁČEK, V.:
1500 let matky ruských měst (1500 years of the Mother of Russian Cities)
Lidé a země, 31, 1982, No. 9, pp. 406-413.
6 photos, 2 figs.

In 1982 Kiev celebrated the 1500th anniversary of its founding; it is the oldest of all east European cities and the first Eastern Slavonic metropolis. This event was included by UNESCO among world cultural anniversaries. The article describes the history of the city, which is now an important cultural, political and economic centre of the Ukranian Soviet Socialist Republic. Motorcycles, radios, camaras, automatic machine tools, fishing and sea ships, computers, artificial diamonds and airplanes are among the products made there.Also the chemical and food processing industries are important. Kiev is the site of the Academy of Sciences of the Ukranian SSR and it has 20 institutions of higher learning. Two thirds of its area are covered by greenery. There are also a number of cultural and historical monuments.

geography - regional geography - Ukranian SSR - Kiev. 147759.

424. CHRENKA, L.:
K divokej hore Jammu (To the wild mountain Jammu)
Lidé a země, 31, 1982, No. 6, pp. 251-256.
8 photos, 2 maps.

In March 1981 a Czechoslovak mountaineering expedition of 24 members took off by airplane to Bombay with the aim of climbing in the Himalayas. In north-eastern Nepal one fifteen member group led by I. Galfy attempted to climb the third highest mountain on Earth, Kangchenjunga (8598 meters). A second 9 member group led by the author of this article climbed Jammu (7710 m) which because of its shape is called the Matterhorn of the eastern Himalayas.

geography - physical geography - mountaineering - regional geography - Nepal - Czechoslovakia. 147759.

425. KANDRÁČOVÁ, V. - MECHAELI, E.:
Prešov
Lidé a země, 31, 1982, No. 7, pp. 301-304.
4 photos, 2 maps.

Prešov is the largest town in the Šariš district of Slovakia; in 1982 the town celebrated the 735th anniversary of its founding. The authors describe the history of the town until the present and its lay-out, cultural and historical momuments, its modern sections and modern industry. In 1930 Prešov had 20 000 inhabitants and 68 plants; at present the town has 72 000 inhabitants and its area has grown to 80 km^2. Its largest plant is ZPA which makes electromotors, robots and other products, Prešov is also a tourist centre for eastern Slovakia and a point of departure for those visting the natural beauties of its vicinity.

geography - regional geography - Prešov - historical geography - Czechoslovakia. 147759.

426. KIRTLEY, M. - KIRTLEY, A.:
The Ivory Coast - African Success Story
National Geographic, 162, 1982, No. 1, pp. 94-125.
24 photos, 1 map.

In the midst of the politically stromy African continent and amidst more than 60 different ethnic groups, the Ivory Coast remains a model of economic and political stability. The government maintains tribal traditions and is striving to cultivate a national awareness among these tribes. The country measures 322 500 km^2 and has 8 262 000 inhabitants, including two and a half million migratory workers, 100 000 Lebanese and Syrians and 50 000 Frenchman. The capital of Abidjan has 1 587 000 inhabitants and is the main port of the country, as well as a railway junction and a financial and trade centre. The Ivory Coast became independent of France in 1960. Its religions are Muslim, Christian and pagan. The author briefly describes the history of the country, the struggle for independence led by Félix Houphouët-Boigny who is now the president. The country has a 25 % literacy rate which continues to increase, the average age of its inhabitants is 46 years. The country has good quality agriculture and is the world´s most important cocoa grower, with very good coffee and palm oil crops, as well as pineapples, bananas, cotton and rare woods. The average per capita annual income is 1 060 US dollars. The country is politically stable, without the political conflicts between various tribes which are typical of so many African countries. The Ivory Coast has the highest living standard in western Africa.Its 2.5 million immigrants have mostly come for work. Petroleum extraction is in its beginnings with 10 000 barrels a day which cover about one third of the country´s needs. By 1983 the country is expected to be self-sufficient and will begin the export of petroleum. There are many wild animals in the country and also the largest national park in western Africa, called the Komoé National Park with an area of 11 500 km^2.

geography - economic geography - regional geography - Ivory Coast - USA. 147759.

427. KLINDA, J.:
V krajine Etruskov (In the land of the Etruscans)
Lidé a země, 31, 1982, No. 8, pp. 342-347.
6 photos, 2 maps.

The author describes his trip to the land of the Etruscans. He visited the Apennines, the Arno river valley and Florence (500 000 inhabitants) with its expectional cultural treasures (works of art by Michelangelo, Leonardo da Vinci, Botticelli, Tizian, Tintoretto, Raffael, Andrea del Sarto, Fra Angelico and many others, including Rembrandt, Rubens and van Dyck). The area also has highly developed machine tool, chemical, glass, polygraphic and ceramics industries. The author also visited Pisa, Leghorn and Elba, where large iron ore deposits are located. This island has 224 km^2 and 30 000 inhabitants. Grapes, citrus fruits, figs and chestnuts are cultivated there. The highest mountain on Elba is M. Capanne (1018 m). Among the tourist attractions of the island are a museum devoted to Napoleon Bonaparte and the sea caves of Grotta di Mare and Grotta d´Oggi.

geography - regional geography - Italy - historical geography - Czechoslovakia. 147759.

428. KOHLHEPP, G.:
Bevölkerungsentwicklung und Verstädterung in Brasilien
(Population developments and the development of cities in Brazil)
Geographische Rundschau, 34, 1982, No. 8, pp. 342-351
11 figs., 3 tabs.

An analysis of Brazilian population trends provides an opportunity to study demographic trends in Latin America (where Brazil represents 33 % of the population) and at the same time indicated specific irregularities in population trends in the Third World which represents 74 % of the world's population. The analysis provides data on the intensity of population increments, the territorial and temporal course and disparity of development in rural and urban areas, as well as important indicators of worldwide trends. The example of Brazil is therefore very interesting. The basic process which requires further study is the migration from rural to urban areas and the changing structure of large cities. Brazil has two huge cities: Rio de Janeiro and Sao Paolo, which also attract the largest number of migrants. Hardly any migration is aimed at the capital of Brasilia.

geography - economic geography - geographic demography - regional geography - Brasil - FRG. 147757.

429. KOLEJKA, J.:
Do pohoří Baba (To the Baba mountains)
Lidé a země, 31, 1982, No. 6, pp. 273-276.
4 photos, 1 map.

The author describes a trip to Yugoslavia, to the Socialist Republic of Macedonia and to it northern mountains, fertile valleys, large lakes and cultural monuments from various periods. The southernmost tip of the republic is on the barder with Greece near the town of Bitola, which has 70 000 inhabitants. Bitola lies at the foot of Mount Baba, which is known for its architectural monuments dating from ancient times until the present. 10 kilometers from here lies Mt. Pelister (2 601 m). The author describes the landscape, lake Golemo which is situated 2218 above sea level and the remnants of trenches dating from World War I.

geography - tourism - regional geography - Yugoslavia - Macedonia - Czechoslovakia. 147759.

430. KRÁL, V.:
Problémy s geografickým názvoslovím (Problems with geographical terminology)
Lidé a země, 31, 1982, No. 5, pp. 237-238.

There are continuing difficulties with geographical terminology, especially with the names of foreign places. Czechoslovak geographical literature is also guilty of various errors. The problem itself is one for linguists, but a number of other branches of science have a contribution to make in this field, including ethnography, geography, cartography, etc. The Institute for the Czech Language of the Czechoslovak Academy of Sciences has a special Committee for Names of Localities,which publishes 5 times a year a publication called Zpravodaj místopisné komise ČSAV. The Terminology Committee of the Czechoslovak Geodetic and Cartographic Administraion (Názvoslovná komise Československoho úřadu geodetického a kartografického) strives to unify and correct the usages of geographical names and terms on all maps. The author also discusses other institutions and methods for unifying the terminology used.

geography - terminology - Czechoslovakia. 147753.

431. KUBÁT, J.:
Mlčení zvučnější než bouře (Silence which is more resounding then a storm)
Lidé a země, 31, 1982, No. 5, pp. 209-213.
6 photos, 1 fig.

One of the schools in Buddhism in the Far East is Zen, which includes elements of Taoism. According to Zen, the truth is not expressible in words. It rejects accepted standards of what is rational and moral, stresses paradoxes, improvisations, intuition and authentic experience. The author explains the history of Zen, the temple he visited in the mountains of Japan and the education provided by the temple, which provides a person with peace even in the middle of a storm.

geography - religion and culture - regional geography - Japan - Czechoslovakia. 147759.

432. KUKAL, Z.:
Mořské nerostné suroviny (The mineral resources of the seas)
Lidé a země, 31, 1982, No. 11, pp. 501-506.

The bottom of the ocean does not have the granite crust found on the continents which is the source of many mineral deposits. But continental shelfs are part of the continents and hence they do contain continental deposits (of petroleum, natural gas, ores, coal and underwater placer deposits which contain for instance titanite, magnetite, ilmenite, as well as gold and platinum). Coastal areas have accumulations of sands and gravels which are valuable building materials. In ocean basins long-term sedimentation processes have deposited metal ores together with quartz or limestone (manganese, iron, copper, zinc, vanadium, nickel and molybdenum). At the deepest places in the ocean where volcanic activity exists around the cracks in the basalt floor of the ocean, iron oxides are found, as well as oxides of manganese and zinc and copper sufides. The author describes various geological conditions in great depths, in shallow waters and in intermediate areas. The share of petroleum extracted from the sea bottom in 1981 increased to 19 % and by 1981 should represent 33 % of extraction in the capitalist countries; by the year 2000 a full half. In greater depths (of 5 and 6 meters) concretions of manganese which contain up to 20 % of themetal, as well as iron, copper, zinc, molybdenum and cobalt are found. According to estimates there are 200 billion tons of extractable manganese concretions. Ores found in deep marine red clays contain aluminium, iron, manganese, copper, nickel, vanadium and cobalt. Also glauconite and phosphates are found here. So far, however, mining the bottom of the sea still poses a number of very complex technical problems which must first be solved before extraction can begin.

geography - physical geography - geology - sea bottom - ore deposits - extraction - Czechoslovakia. 147759.

433. LESZCZYCKI, S.:
Tajlandia (Thailand)
Geographia w szkole, 35, 1982, No. 5, pp. 203-211.
2 tabs.

The author describes for teachers Thailand, a country on the Indochinese peninsula. He describes its history, boundaries, climate, its coastline on the Andaman sea and South China sea. Thailand has 514 000 km^2; 4750 km of its boundaries run along the land and 2 500 are formed by the seacoast. The country can be divided into 5 district from the point of view of geography: the Menam lowlands, the Korat plain, the Menam river valley, the Ao Krung Thep lowlands and the territory on the Malaysian peninsula. Thai agriculture is extensive with low yields, 52 % of the country's territory is covered by forests which provide rare woods. Fields represent 20 % of its territory, the remainder are meadows and pastures. 70 % of the inhabitants work in agriculture. The country has 46 million inhabitants and in the period 1970 to 1980 there was a 30 % population increment. The capital of Bangkok has 5 million inhabitants. 95 % of the population are Buddhists and the country has 150 000 Buddhist monks.The author describes the country's trade exports and imports, its natural resources, agricultural and industrial output and other aspects of Thai life.

geography - economic geography - regional geography - Thailand - Poland. 147759.

434. LEWATHES, L.E.:
Toledo - El Greco´s Spain Lives On
National Geographic, 161, 1982, No. 6, pp. 726-735.
5 photos, 1 map.

The city of Toledo has not changed much since the time when the painter El Greco lived there. The Romans, Christians, Visigoths and Moors all had their turn ruling the city. In 1085 Alphonso the VIth won the town from the Moors and returned it to Christians. Later the town lost its luster and under Philip II, the capital of Spain became Madrid. El Greco was born on the island of Crete in 1541 and was probably trained as a painter of icons. He took the name El Greco and left for Naples and Rome where he studied with the great masters of Italian Renaissance painting; he recieved an apparentice certificate from Tizian. He arrived in Toledo in 1570 when he was 30 years old and sought work at the court of Philip II. who was then the mightiest ruler in Europe at that time. At present Toledo has 55 000 inhabitants and in the summer an average of 10 000 tourists visit it every day. Toledo has a famous gallery and a school of applied arts. There are a number of medieval castles in the vicinity, as well as windmills and famous pottery workshops. Swords and light weapons are also still made here. After the court moved to Madrid, El Greco remained in Toledo, where he died in 1614. He was buried at a church which in the 19th century was destroyed and so today his grave has been lost. The photographs show not only the town of Toledo, but also some of El Greco´s paintings. The history of the town and its present features are all described in detail.

geography - historical geography - painting + El Greco - Spain - USA. 147757.

435. LIŠKA, K.:
Velvary - 500 let od povýšení na město (Velvary - 500 since it was raised to the status of city)
Lidé a země, 31, 1982, No. 11, p. 523.
3 figs.

A document of the Vyšehrad church mentions Velvary already in the year 1282. During the rule of the emperor Charles IV Velvary were made a town and in 1482 king Vladislav II raised its status to that of a city. The document cites 17 seals and the emblem of the city. In 1593 the emperor Rudolf II made Velvary into a Royal City. In 1639, during the thirty year war, the Swedes burnt down the city. Today it belongs to the Kladno district and is an important industrial town, In 1980 it had 3 026 inhabitants.

geography - historical geography - regional geography - Czechoslovakia. 147759.

436. LUŇÁK, H.:
Ile de Sein
Lidé a země, 31, 1982, No. 7, pp. 314-317.
4 figs., 1 photo, 1 map.

The island of Ile de Sein is a rocky protusion low above the surface of the sea, about 8 kilometers from the French mainland. It has a single village with a small port, a single tree and 800 inhabitants on an area of one square kilometer. There is a lighthouse, and a solid dike which protects the village from storms. The Czech painter Jan Zrzavý painted here during his stay in Brittany. The island is opposite the feared Pointe du Raz cape.

geography - physical geography - regional geography - French seacoast - Czechoslovakia. 147759.

437. MARKOVÁ, Z.:
Singapur se chystá na příliv turistů (Singapore is preparing for large numbers of tourists)
Lidé a země, 31, 1982, No. 5, p. 225.

In the next 5 years Singapore is planning to double its hotel capacity and in 1985 be able to offer 28 000 hotel rooms. Tourism is to increase annually by 10 - 12 %. In 1980, 2.58 million foreigners visited Singapore and for 1985 a total of 4 million are planned.

geography - economic geography - tourism - Malaysia - Singapore - Czechoslovakia. 147759.

438. MERTINS, G.:
Determinanten, Umfang und Formen der Migration Nordostbrasiliens (Determinants, volume and forms of migration in northeastern Brazil)
Geographische Rundschau, 34, 1982, No. 8, pp. 352-358.
2 figs., 5 tabs.

The drought which has been strickening the northeast of Brazil, together with the attraction of large cities in the southeast, such as Sao Paolo and Rio de Janeiro, are the causes of a process which is changing the norteast into a periphery. This migration is having serious economic consequences. The author explains in detail both the causes and consequences of this process and provides surveys in the form of tables which show the most important trends in question, based on data collected by domestic and foreign sources.

geography - economic geography - demography - regional geography - Brazil - FRG. 147757.

439. MÍCHAL, J.:
Františkovy Lázně
Lidé a země, 31, 1982, No. 3, pp. 132-133. 1 photo.

Františkovy Lázně is a spa in western Bohemia. Its mineral springs and therapeutic procedures provide cures specifically for women suffering from gynaecological problems and infertility. Among its procedures are compresses of the local peat. The spa was already mentioned by Balbín in 1196. In the 16th century it was studied by Paracelsus. In 1793 it became a suburb of the town of Chab (Eger). There are 20 mineral springs at the spa, among which is the Glauber spring, with the highest sodium sulphate content in the world. Also dry natural carbon dioxide gas is used for treatments. Besides gynaecological treatments, the spa also treats cardiac and motor system disorders, as well as rheumatism. In the vicinity of the spa a peat bog with mofettes is located, called Soos. J.W. Goethe who visited the spa several times, discovered near Skalka the mineral Egerite and studied the volcano Komorní Hůrka which is nearby.

geography - historical geography - economic geography - spas - Czechoslovakia. 147757.

440. MÍCHAL, J.
Lázně Bechyně. (The Bechyně spa)
Lidé a země, 31, 1982, No. 6, pp. 277-278. 1 photo.

Bechyně in southern Bohemia has had the status of town for more than 750 years. The town was founded in the 13th century and since the 15th century it became a famous pottery manufacturing centre. The spa was founded on the basis of the iron oxides found in the local water. The first spa was built in 1730. Among the therapeutic procedures at the spa are mud baths and compressions, various other baths, therapeutic physical training and rehabilitation. Among the diseases treated are diseases of the spine, polyarthritis, coxarthrosis, post infectional arthritis and diseases of the muscles and tendons. There is a museum, palaces, historical monuments and beautiful walking terrains are found in the vicinity of the spa.

geography - historical geography - economic geography - spas - Czechoslovakia. 147757.

441. MÍCHAL, J.:
Lázně Bílina (The Bílina spa)
Lidé a země, 31, 1982. No. 4, pp. 182-183, 1 photo.

Bílina mineral water is a well known water for treating digestive disorders. Since the 18th century this mineral water has been exported. Large quantities are also consumed domestically. In the vicinity of the spa there are basalt and phonolite formations of the Bohemian central massif. The author describes the history of the spa, which was founded by the physician F.A. Reuss. After nationalization the spa was reconstructed and now serves the national health system. Among the diseases treated here are inflammations of the respiratory tract and gastroenterological disease. Among the therapeutic measures are inhalations and others.

geography - historical geography - spas - Czechoslovakia. 147757.

442. MÍCHAL, J.:

Lázně Bohdaneč (The Bohdaneč spa)

Lidé a země, 31, 1982, No. 8, pp. 374-375.

The Bohdaneč spa specializes in the treatment of motor system disorders and there are special mud baths for those suffering from rheumatism. Treatment was begun in 1897. The spa specialized in peat and mud compressions and baths and in 1914 a new artesian well providing warm mineral water was drilled to a depth of 350 m.

geography - economic geography - spas - Czechoslovakia. 147757.

443. MÍCHAL, J.:

Lázně Dubí (The Dubí spa)

Lidé a země, 31, 1982, No. 12, pp. 562-563. 1 photo.

The Dubí spa is in the Krušný mountains of Bohemia near the town of Teplice. It was founded by the owners of the mines at Cínovec and Krupec. It derives its name from the nearby oak forest (oak in Czech is dub). The author describes the interesting history of the spa. In 1946 a fire destroyed the spa which was later rebuilt and now specializes in nervous and mental disorders. The vicinity of the spa provides many opportunities for tourism and hiking.

geography - historical geography - economic geography - spas - Czechslovakia. 147757.

444. MÍCHAL, J.:
Lázně Kynžvart (The Kynžvart spa)
Lidé a země, 31, 1982, No. 11, pp. 521-522.

The Kynžvart spa is in northwestern Bohemia, 9 kilometer from Mariánské Lázně (Marienbad). The climate is very good and there are numerous mineral water springs. The first historical mention of Kynžvart is from 1454. The spa itself dates from 1856. During World War II the spa was destroyed and reopenned in the fifties. It now specializes in the recuperation of patients after the whooping cough, as well as the treatment of other pediatric respiratory disease and dermatological diseases of children. In 1956 new drilling was undertaken and new springs openned. Annually 1 500 young patients take the cure in 6 to 9 week stays.

geography - economic geography - historical geography - spas - Czechoslovakia. 147757.

445. MÍCHAL, J.:
Lázně Libverda (The Libverda spa)
Lidé a země, 31, 1982, No. 2, pp. 85-86. 1 photo.

The Libverda spa is in northern Bohemia near the border with Poland, near the town of Frýdlant, at an altitude of 440 meters above sea level. Libverda is the northernmost spa in Bohemia and also one of the oldest. Its mineral springs have been used for their therapeutic effects since the 14th century. First historical documents come from the year 1601. Since the beginning of the 19th century the local peat has also been used for compressions. During the fifties, drilling provided a sufficient amount of mineral water of a very good quality. At present diseases of the circulation system, nervous disorders, mental disease and others are treated here by various methods and also acupuncture is practiced here.

geography - economic geography - historical geography - spas - Czechoslovakia. 147757.

446. MÍCHAL, J.:
Lázně Velichovky (The Velichovky spa)
Lidé a země, 31, 1982, No. 9, pp. 425-426.

The Velichovky spa is located near the town of Jaroměř in eastern Bohemia. It is well known for its treatment of various diseases of the motor system by various methods. It began to function as a spa in 1897.

geography - historical geography - spas - Czechoslovakia. 147757.

447. MÍCHAL, J.:
Lázně Vráž u Písku (The Vráz spa near P[illegible]k)
Lidé a země, 31, 1982, No. 10, pp. 469-4 1 photo.

The Vráž spa is in southern Bohemia near the town of Písek and the river Otava. The spa has a beautiful park with rare trees. The main building used to be a palace, the summer home of the Lobkowitz family. The spa has a capacity of 20⁰ persons and specializes in the treatment of nervous disease and those which are the outcome of contact with lead, mercury, arsenic, benzenes, etc. The vicinity of the spa provides beautiful opportunities for walking and hiking.

geography - spas - Czechoslovakia. 147757.

448. MÍCHAL, J.:
Teplice nad Bečvou
Lidé a země, 31, 1982, No. 5, pp. 230-231. 1 photo.

The spa Teplice over the Bečva river is best known for treatment of circulation disorders and heart disease. They are found in the Bečva river valley in the woody Beskyd foothills near the town of Hranice in Moravia. There are warm springs with a high carbon dioxide content which are used for baths. The vicinity provides the opportunity for beautiful walks and visits to several historical monuments.

geography - spas - Czechoslovakia. 147757.

449. MÍCHAL, J.:
Velké Losiny
Lidé a země, 31, 1982, No. 7, pp. 329-330. 1 photo.

Velké Losiny are located 10 kilometers from the town of Šumperk in the foothills of the Jeseník mountains and the valley of the Desna river, in northern Moravia. The water here contains sulphates and is the only spring of this type in the country. The spa has been in existence for 700 years. It used to specialize in the rehabilitation of children afflicted with infantile paralysis, but since this disease no longer exists they now specialize in the treatment of children with disorders of the central nervous system and non-specific disorders of the lower respiratory system.

geography - historical geography - spa - Czechoslovakia. 147757.

450. NOVÁK, J.:

Thera, ostrov dávné katastrofy (Thera, an island where a catastrophe occured long ago)

Lidé a země, 31, 1982, No. 6, pp. 247-250.
4 photos, 1 map.

Since the time of Plato there has been a myth about a sunken island on which an advanced civilization existed. Archeologists have now verified that this myth has a true essence: excavations on the Greek island of Thera (Santorin) have provided proof of a Minoan town with a highly developed civilization. In the year 1 600 B.C. the volcano on the island became active and the whole island was devastated by a series of earthquakes, volcanic bombs and volcanic ash. Probably many of the inhabitants were successful in escaping to neighboring islands the final explosion; according to scientists, it also destroyed the palace and its vicinity on nearby Crete. The centre of the island of Thera sank into the sea and a huge tidal wave destroyed everything which had still remained intact. A caldera was created on the spot with a diameter of 13.5 kilometers which was flooded by the sea. In 1650 an underwater explosion occured on the northern coast and in the 18th century the volvanic islands of Palea and Nea Kaimeni were raised from the caldera. The most recent volcanic activity occured in 1950 and an earthquake destroyed the islands in 1956. The author describes his trip to the island and the findings of archeological expeditions concerning the Minoan culture in the period before 1500 B.C. He also describes the ruins of an excavated ancient town.

geography - historical geography - regional geography - Greece - archeology. 147759.

451. PAGE, J.:
Inside the Sacred Hopi Homeland
National Geography, 162, 1982, No. 5, pp. 607-629.
2 photos, 4 maps.

The author visited the Indian Hopi tribe 18 times and made many friends among them. He thus became the first white man to accompany them to their sacred homelands, which only 11 members of the tribe, who are priests, know about. The Hopi live in the southwest United States, in Utah, Colorado, Arizona and New Mexico. The ancestors of the Hopi were nomads in this area, already in the period before Christ. In the 12th century several families settled in the vicinity of Oraibi, one of the oldest permanently settled localities in the USA, They settled at a place now called Black Mesa. In the 1700 the Navahoes began to settle in the Hopi lands. Conflicts concerning territorial claims were frequent and some of them had to be settled by the US but in 1930 the Hopi reservation was made smaller and in 1947 it was only an enclousure within the Navaho reservation. At present the Hopi tribe has 8500 members who maintain their traditions and religion. Their Snake Dance is well known, in which the dancers hold a rattlesnake in their teeth, as well as the Buffalo Dance and the Butterfly Dance. In the arid areas they now inhabit their greatest longing is for extensive rainfall on which their crops depend.

geography - population geography - ethnography - Indian tribes - USA. 147759.

452. PLETSCH, A.:
Südfrankreich - wirtschaftlicher Schwerpunkt oder Problemgebiet der EG ? (Southern France - a center of economic activity or a problem area for the European Community ?) Geographische Rundschau, 34, 1982, No. 4, pp. 144-152.
Lit. 32, 1 photo, 4 maps, 1 tab., 4 diagrams.

Southern France has been in the forefront of interest of French economists, because the area is undergoing very rapid economic development. But a more detailed study area indicates that behind the irrigation projects, new manufacturing firms and the development of tourism a number of problems are lurking, which are a source of concern. The article deals with the following problems: Is southern France an economically independent area or is it a periphery which essentially is underdeveloped ? How should the area be characterised from an economic and theoretical planning model point of view ? What is its relation to the French economy as a whole ? Has southern France after 20 years of economic development and a policy of support by the centre become independent of outside help ? All forecasts for the future are difficult because so much depends on political changes, the development of the business cycle, etc. which could all have an adverse effect on the development of the area. The general economic situation remains unstable. The area continues to be peripheral and similarly to other peripheral areas it remains strongly dependent upon decisions made at the centre. Most typically, contradictions between traditional small scale agriculture and modern large scale production remain.

geography - economic geography - regional geography - southern France - regional disparity - FRG. 147759.

453. ROSENKRANZ, R.:
Die Erdöl - und Erdgasressourcen Mexicos und ihre ökonomische Bedeutung (Petroleum and natural gas resources in Mexico and their economic significance)
Geographische Rundschau, 27, 1982, No. 1, pp. 55-68.
6 tabs.

An extensive study by a member of the staff of the Research Institute belonging to the Ministry of Foreign Trade of the German Democratic Republic who first describes the struggle of the Mexican people with American monopolies over the ownership of their natural wealth. Only after the petroleum fields were nationalised (before nationalisation they were 93 % owned by foreigners) in this national wealth purposefully developed. The author provides a description of Mexico's petroleum and natural gas resources, the depth of drilling in various fields and the contribution of this industry to the Mexican economy and balance of payments. Mexico's international debt in 1981 reached 60 to 70 million US dollars. In conclusion the role of the petroleum and gas industry in the balance of payments is discussed in detail.

geography - economic geography - petroleum - natural gas - extraction - Mexico - GDR. 147759.

454. ŠLACHTA, M.:
Falklandy - Malvíny (The Falklands or Malvinas)
Lidé a země, 31, 1982, No. 10, p. 466-467. 1 map.

The Falkland archipelago measures 12 173 km^2 and lies on the South American continental shelf 500 kilometers from Patagonia and 13 000 kilometers from the shores of Great Britain. The author describes the history of the islands, the attempts of the French to colonise them with military force. Englishman brought sheep here, drove out the Spanish speaking ranchers and colonized the islands with British people. There are 663 400 sheep on the island. The conflict over the islands continues, even after the war between Britain and Argentina.

geography - economic geography - regional geography - Falklands - historical geography - Czechoslovakia.
147759.

455. ŠLACHTA, M.:
Marshallovy ostrovy přidruženy k USA (The Marshall Islands annexed to the USA)
Lidé a země, 31, 1982, No. 11, p. 489.

In January 1978 the Mariana Islands became an independent territory and the Marshall Islands also accepted a republican constitution. An agreement assures the Marshall Islands full internal autonomy and their government has the right to decide on foreign policy. The USA is keeping for a period of 15 years full powers as far as the defence of the islands is concerned and for a period of 50 years will provide the islanders with aid for a total sum of 1.5 billion dollars. The Marshall Islands are formed by 34 atolls composed of 867 islands with a total area of 179.3 km^2 of land. There is a shortage of drinking water on the islands. The basis of the economy is agriculture (coconuts) and fishing. 90 % of all consumer goods and food are imported. The number of 31 000 inhabitants is increasing at the rate of 3.4 % annually. Coconut plantations are being developed on an area of 10 400 hectars. The atolls of Bikini and Eniwetok have been uninhabitable since the testing of American atomic bombs in the forties.

456. VAISHA, A.:
Životní podmínky ve městech (Living conditions in urban areas)
Lidé a země, 31, 1982, No. 6, pp. 278-279.

In Czechoslovakia 50.8 % of the population lives in towns of 10 000 inhabitants and more (in 1980). The urban environment is formed by man-made and natural conditions. The quality of the environment depends upon how towns and cities fulfill their settlement,economic, administrative, transportation and other roles. All this leads to extensive changes in the natural environment. The life of urban inhabitants depends upon the quality of housing, the structure and number of jobs available, the number, quality and complexity of the urban superstructure. But in the majority of cases the environment in urban areas tends to be polluted by solid, liquid and gaseous waste, not only from settlements but also from industry and transportation. The greatest problems are in northwestern Bohemia, in the area between Cheb and Děčín.

geography - regional geography - settlement geography - urban development - Czechoslovakia. 147796.

457. VONDRUŠKA, V.:
Polští Tataři (Polish Tatars)
Lidé a země, 31, 1982, No. 5, pp. 226-229. 4 figs.

A unique ethnical group living in Poland are the Tatars who live in an area which was the border between the former Lithuanian and Polish states, since the 14th century. They are probably the descendants of the Golden Horde, which during the rule of the Khan Usbek (1312-1342) ruled here; during the rule of Prince Witold at the end of the 14th century more Tatars came to the area. In 1679, after the successful military operation of Jan Sobieski (John III) against the Turks, the Tatars were offered land in place of the pay they had been promised; this land was in several villages in the Białystock region and the descendants of Sobieski's soldiers live there to this day. As late as the twenties of the present century there were 50 000 Tatars living there, but after World War II only 3 000 have remained on the border between the Lithuanian Soviet Socialist Republic and the White Russian SSR. The author describes their life and culture.

geography - regional geography - historical geography - Poland - White Russia - Lithuania - Tatars - Czechoslovakia. 147759.

15.5 Geographic cartography

458. **FRIEDLEIN, G.:**
Sowjetische Forschungen zur Synthese in der Kartographie
(Soviet research aiming at synthesis in cartography)
Petermanns geographische Mitteilungen, 126, 1982, No. 4, pp. 231-232.

The author informs readers about the publication of a collection of papers devoted to the making of synthetic maps and the use of synthetic indicators on maps. The editor of the collection is K.A. Salishchera and it was published by Moscow University in 1976. A seminar was held on the subject of synthetic maps where four problems concerning the modern approach to "synthetic" maps were discussed: problems of physical maps, of socio-economic maps, of general cartography and of methods used in making synthetic maps.

geography - cartography - synthetic maps. USSR. 147763.

459. LIŠKA, K.:
Rakovník - 500 let od udělení městského znaku (500 years since the town of Rakovník acquired its town coat of arms)
Lidé a země, 31, 1982, No. 10, p. 453. 1 fig.

Half a millenium ago the town of Rakovník recieved the right to have its own coat of arms. This very old Royal Town was given this right by king Vladislav II on February 12th 1482 in a document, written in Latin, which is still extant. The first written mention of Rakovník comes from 1119.

geography - historical geography - coat of arms - Rakovník - Czechoslovakia. 147759.

15.7 Environmental theory

460. DUBEL, K. - SZYCIELSKI, L.:
Ocena przydatności środowiska przyrodniczego wojwodztwa katowickiego do potrzeb turystyki i wypoczynku
(An assessment of the suitability of the natural environment in the Katowice region for the purposes of tourism and recreation)
Czasopismo geograficzne, 53, 1982, No. 2, pp. 159-178. Lit. 19, 2 figs., 3 tabs.

The article attempts to assess the suitability of the natural environment for purposes of tourism and

and recreation in the Katowice region by attaching points on a scale to various factors in the environment. All places suitable for tourism and recreation have been listed, but it has been found that the intensive development of mining and agriculture, as well as urban development have led to a decrease in the number of such places, in their biological activity and thus to a deterioration in the quality of the environment.

geography - environmental control - recreation and tourism - Poland. 147796.

461. WÓS, A.:

Struktura sezonowa klimatu wybranych miejscowości Jugosławii (The seasonal structure of the climate in selected areas of Yugoslavia)
Czasopismo geograficzne, 53, 1982, No. 3-4, pp. 237-252.
Lit. 6, 6 figs., 2 tabs.

The author describes the seasonal structure of the climate in selected areas of Yugoslavia in the form of a survey of facts, based on an analysis of the frequency of typical climatic elements in the course of a number of years. The methods used to study the climate make it possible to determine in each area periods of time in which the weather is stable and attractive for specific activities.

geography - physical geography - climatology - environmental theory - Yugoslavia. 147755.

DIDACTICS OF GEOGRAPHY

Selective Bibliography for 1982

Published by: Central Library - Information and Reference Centre Pedagogical Faculty of the Charles University

Edited by: Dr Antonín Altmann

Chief Editor: Dr Pavla Lipertová

Printed by: Tiskařské závody, Čelákovice

Number of pages: 392

Number of copies: 100

Year of publication: 1985

ÚVTEI 760 47

RUK 60 200